ABSTRACT OF

The Milroy Lectures,

ON

DIPHTHERIA, ITS NATURAL HISTORY AND PREVENTION.

Delivered before the Royal College of Physicians of London,

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.

LECTURE III.

THE third lecture was largely devoted by Dr. Thorne Thorne to the subject of "school influence" in relation to diphtheria. That some such influence obtained had been one of the earliest observations following on inquiry into this disease, and it was at first assumed that the question was simply one of personal infection under specially favourable circumstances. Beyond this the earlier investigations did not go. Dr. Thorne cited as an example of further progress the story of the Coggeshall epidemic in 1877, from which it was seen that under three years of age school attendance did not materially affect the number of attacks, that between three and twelve years the incidence was 50 per cent. greater on those attending school than on those who did not, and that from twelve to fifteen years the school attendants suffered three times as much as those not known to attend school. An outbreak at Radwinter was next adverted to, from which it appeared that school attendance had clearly afforded to healthy children at a particular age the special opportunity of coming in contact with others capable of transmitting throat infection. There was also a marked difference in the incidence of the disease at different ages, on school attendants, and on others, and it was noticed that from three to twelve years, 76 per cent. of school attendants were the first attacked in households; whereas, including all subsequent attacks at those ages, they only amounted to 48 per cent. There was also some evidence to show that attack and death were more common in the same locality in the case of schools that were overcrowded and ill-ventilated than in others.

But in 1883 an outbreak at Pirbright, which was investigated by Mr. Power, revealed other features of school influence. It was here distinctly shown that the child of from three to twelve years of age had, for a reason other than its age, a susceptibility to contract the disease and to convey it home, school-going being the reason in question. Then, again, each time the school was closed the diphtheria practically came to an end; each time it was reopened the disease recommenced, and this without any source of infection that was obvious, although much care was taken to detect any such cause. And although it became quite clear that school attendance had played an important part in the speciality of the diphtheria amongst children at the ages of three to twelve years, it seemed clear that faulty sanitary circumstances had had no concern that could be detected in bringing about this result. But a further point was illustrated by reference to the facts observed. Not only did diphtheria break out each time school operations were recommenced, but the disease appeared on each occasion with startling suddenness and with fatal gravity, and this without any known intermediate cases which could have admitted of a process of progressive infectiveness; and it seemed that the mere bringing together of the children was responsible for imparting to the throat affection the serious specific quality in question. Other cases were also cited in which the commencement of school operations had led, after apparent cessation of diphtheria, to sudden "explosions" of the disease, and one instance was quoted to show that other aggregations of children than those actually in school houses operated much in the same way. The case in question was one recorded by Dr. Bruce Low, in which a school treat was held on a damp day in a tent after a prevalence of throat disease, the result being that the disease broke out again within twenty-four hours, with a virulence and fatality quite in excess of anything that had gone before; and it was held that such aggregations had, under certain circumstances, the peculiarity of manufacturing, as it were, an infection of a special potency and virulence.

Another point had also been observed in connexion with school attendance—namely, the recrudescence of the infective quality attaching to throat affections, the observations as to this having been mainly recorded by Dr. Astley Gresswell. It had been noticed that a number of persons in different parts of the country, who had years before been attacked with diphtheria, were constantly suffering from throat affections, any change of weather or trifling cold sufficing to produce an acute inflammatory condition about the tonsils. And it having been observed on a number of occasions that amongst those associating with such persons there had occurred cases of diphtheria the origin of which could not be accounted for, the question arose whether the chronic tonsillar affection left in certain persons after diphtheria might not be due to the continued sojourn in them of the material cause of diphtheria. A series of instances were quoted in connexion with these occurrences, and it was especially pointed out that in schools diphtheria attacks had occurred immediately subsequently to the recurrence in monitresses, who had previously had diphtheria, of any symptoms of renewed throat mischief such as was assumed only to have resulted from taking cold. These cases have suggested dormancy and recrudescence in an infectious form of the material cause of diphtheria in an individual. The obscurity involved in such occurrences was also pointed out to be the greater because convalescents from diphtheria, who have returned to their work with healthy looking tonsils, may be found shortly afterwards with creamy patches on the tonsils and pharynx, or even with genuine diphtheria membrane on the fauces, and this apparently without the general symptoms usually affecting the system when such results ensue on a primary attack of the disease. Diphtheria appeared, according to the views expressed, to become at times a chronic malady in certain individuals with liability to recrudescence; and glanders in the horse, contagious ophthalmia in children, as also gleet in its relation to gonorrhœa, were referred to as analogous to diphtheria in this respect. A somewhat parallel experience had also been noticed in the case of certain parasitic organisms, which exhibited periods of renewed vitality, to which the term "rejuvenescence" had been given. And, as regards diphtheria, it was stated that such recrudescences had mostly been associated with unwholesome circumstances and surroundings much of the same sort as those conditions which had before been shown to induce a form of sore-throat which rendered the individual especially liable to receive the diphtheria contagium, the tonsils under such circumstances affording exceptionally suitable hosts for sustained maintenance of the virus of the disease. Such experiences, also, may possibly afford one explanation of the circumstance that an attack of diphtheria does not, as is the case with most of the specific fevers, afford immunity from a second or even a third attack.

Dr. Thorne then summed up, under a number of headings, the various methods in which school influence would appear to be operative in favouring diphtheria, and he laid especial stress on the conditions of school life that tended to communication of the disease from person to person by reason of the closeness of the mouth and nares of the recipient individual to the faucial mucous membrane of the individual by whom the infection is imparted. And reverting again to the excess of diphtheria in females at school ages over males, he pointed out how a number of practices which tended to danger, such as the collective singing and intoning of lessons, kissing, and the sharing of sweetmeats, were more commonly sources of mischief amongst girls than amongst boys. And this led him to speak of one possible cause of excess of diphtheria amongst females who had reached more adult years. Premising that age susceptibility had by that time largely passed away, he was inclined to think that a much closer contact with diseased fauces was necessary in the case of adults than in children, and he pointed out that whereas in diphtheria wards, where nurses were in the habit of carrying the sick children about; the spread of the disease to those nurses was not uncommon, there were instances where no such spread had been known for a series of years, this result being associated with a prohibition to lift or carry about a diphtheria patient. The danger to adults of close contact with diphtheria was exemplified by the terrible risks

incurred by surgeons and dressers in endeavouring to save life by suction of blocked tracheotomy tubes; but whilst such action must be regarded as akin to a deed of heroism, the needless actions of parents, nurses, and others who could not be prevented from embracing and fondling the diphtheria sick amounted only to a wanton carelessness of life. And when, as is not uncommon, especially in some northern counties, children were deliberately brought by school teachers to see and even kiss their dying or dead schoolmates, the practice became one bordering on criminal culpability. The various aspects of school aggregation, involving a steadily increasing stringency in bringing together children to the elementary schools under our present Education Acts and regulations, were next considered, in so far as the success in attaining those educational results may have had a bearing in the increasing incidence and fatality of diphtheria both in the country generally, and especially in our large towns and cities. And in this connexion Dr. Thorne explained that again and again had suggestions to exclude from school children residing in infected houses and localities been resented, because the step tended to diminish the average attendance on which the financial status of the school, and at times of the teachers also, was dependent. Indeed, when children stayed away from causes such as "sore-throat," amongst others, there was at times a "whip-up" of this dangerous absentee residuum; and it had become notorious that the suspicious form of sore-throat previously adverted to could most easily be found in schools. Then often followed "explosions" of diphtheria. "And if," said Dr. Thorne, "as I have suggested, the specific organism of diphtheria tends to behave as do certain low forms of vegetable life, may it not be that, just as special characteristics tend to be developed by the gathering together into a hothouse of selected forms of plant life that have hitherto been struggling towards a tardy and imperfect development in the open, so the increased virulence and greater reproductiveness of the diphtheria contagium, which would appear in point of time to have been associated with the steady growth of a system by which the young are gathered together for educational purposes may turn out to be dependent on the aggregation, forced or otherwise, within school premises, of children suffering from such throat ailments as I have indicated?"

ABSTRACT OF THE

Goulstonian Lectures

ON

LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians, March, 1891,

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LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—Let me thank you for the very great honour which you have conferred upon me in inviting me to become the Goulstonian lecturer for the year. Having accepted the office, I am deeply sensible of the responsibility it involves. Weighty as I feel the duty imposed upon me, it is only equalled by my desire to make these lectures acceptable and instructive. In searching for a subject, I considered there was one upon which, with the time at my disposal for its preparation and delivery, I might be able, from the opportunities afforded me for its study, to say something that might prove of interest to you and of service to the profession. Lead poisoning is not only of local but of national importance. The last two years have shown how truly necessary it is for us to realise the dangers that lurk in the supply of drinking water and of food. The wholesale poisoning that occurred a short while ago in Sheffield and in Keighley bear witness to this statement. Apart from epidemics of lead poisoning due to the contamination of the drinking-water, it is true that the disease only affected a small proportion of the working classes, but that is one reason why we, who are the guardians of the public health, should help those who cannot help themselves. It was in the College of Physicians that in 1767 Sir George Baker, a scientist of celebrity, first drew the attention of the medical profession at once to the production of colica pictonum by the use of cider, and successfully taught how to remedy the evil. There is a general consensus of opinion that the insidious introduction of lead into the human system in very minute quantities is followed by symptoms of a more serious nature than when taken in large quantities and for a short period. In the latter case we have the symptoms of irritant poisoning, but in the former the symptoms are sometimes so remote that their relationship may escape our attention. In the cumulative action of the poison lies the danger.

Whilst recognising food, water, and fermented liquors as media whereby lead may be introduced into the system, my experience has been gained mostly from workers in lead factories. I shall therefore deal with the subject more from the industrial than the accidental side. Lead poisoning has long been known. Galen condemned the use of lead pipes. Nicandre described acute lead poisoning, and the Roman architect Vitruvius forbade the use of lead for conducting water owing to the *ceruse* which it formed being hurtful to the human body. Lead is introduced into the system through many channels. Those who are engaged in lead mining never suffer. The danger begins with the smelting of the metal. This is a hazardous occupation. The fumes which escape from the molten metal frequently poison cattle grazing in the vicinity of the smelting furnaces—a circumstance which has frequently been a cause of litigation. Cattle have died from eating the grass thus impregnated with lead dust, and the dogs that have lapped the water trickling from lead works have also exhibited signs of lead poisoning. Some interesting points bearing upon this point have been shown by Schroeder and Reuss. In their paper, on the "Influence of Forge Smoke upon the Animals of the Forest," they state that the birds which eat the berries of the mountain-ash trees which are in close proximity to the forges are frequently found lying at the foot of the trees paralysed or dead; but that the wild animals, particularly the stags, which roam about in the woods, whilst not suffering from paralysis of the extremities, exhibit peculiar monstrosities of their horns. Their antlers are short and stunted; the radioles are small, sometimes they are absent, the rosettes in these cases being flat and almost touching the cranium. Double crowns sometimes appear. These monstrosities are most apt to occur amongst stags whose sexual organs have been injured, for stags, like men, have their reproductive organs affected in lead poisoning. Gamgee, in his work on the "Domestic Animals in Health and Disease," draws attention to the fact that cattle have frequently died from drinking water contaminated by lead, and from eating grass impregnated with the oxide of lead, and he has shown that the deposition upon land of town manure which contains the refuse of paint, sheet lead from tea-chests, and pieces of painted oilcloth, has been followed by an attack of what is known as "staggers" in the animals allowed to graze in the fields. Thackrah, in his book on the "Effects of Trades on Health and Longevity," gives no place to lead-making as a dangerous employment. He introduces the subject in his remarks upon plumbers and painters. Plumbers suffer, he says, from the inhalation of the volatilised oxide of lead arising during the process of casting. They are short-lived.

It is amongst lead workers that the worst types of plumbism are met with. So far as the working of lead is concerned we have seen that the producer of the raw material never suffers; it is the smelter. The next danger arises during the process of the conversion of the metal into white lead or carbonate. There is no process of preparation of white lead, so far as is known, that is equal to the old Dutch method. It is a simple but a dangerous procedure. It was introduced into this country about the year 1780. [Dr. Oliver briefly described the process, and showed that the greatest danger arose in what is known as the "white beds" and "stoves."] It was the opinion of Sir James Alderson, when he delivered the Lumleian Lectures in this College in 1852, that women were less frequently affected by lead than men. Such is not my opinion. It is known that when the two sexes are exposed equally, or in epidemics of plumbism from the use of contaminated waters, the fair sex

is weaker, and their nerve centres are more readily undermined.

[Drinking water as a source of accidental lead poisoning was discussed, and the following case reported :]

Last year I saw, in consultation with Dr. Smith of Ryton, a gentleman, aged fifty, who a few months previously had been suddenly seized with unconsciousness in a hay field. The attack was regarded as syncopal. From that day he was never well. He complained of severe pain in the abdomen, just above the umbilicus, and became extremely depressed in spirits. When I saw him a few months afterwards he had all the symptoms of general paralysis. In addition to colic and constipation he had delusions and fibrillary tremor of lips and tongue ; the right pupil was dilated compared to the left ; he was extremely cachectic. He complained of a disagreeable taste in his mouth and a blue line was noticed on his gums. His heart and lungs were healthy. There was no albumen in the urine, but a trace of lead was present in it. He was sent to the seaside, where he improved. The drinking water was analysed, and found to contain 0·0028 grain per gallon. This patient died of an intercurrent disease, but retained many of his symptoms of lead poisoning. At the necropsy there were found thickening of the pia mater and arachnoid over the fronto-parietal region, with accumulation of fluid in the subarachnoid space, extreme pallor and hydræmia of the brain, fluid in the lateral ventricles. His wife had also a blue line on her gums, but none of the children. The water from the well passed through several feet of lead piping into the house.

As an illustration of lead poisoning from the use of fermented liquors I would draw attention to the following case. It occurred in the practice of Dr. Cromie of Blyth, Northumberland. In September of last year he was called to see a botanic beer manufacturer, aged forty-four, who had been a healthy man until two years previously, when he suffered from constipation and dyspepsia. In February, 1890, he had "wrist drop." In August of last year he had a convulsion whilst standing in his shop, but he soon recovered consciousness. The convulsions kept recurring, and in one of them he passed into a state of coma, in which he died. The case was one with all the physical signs of plumbism. The history of his household is interesting. His wife, who is twenty-eight years of age, had formerly a good deal of colour. She is now very anæmic. She has two children, one aged five and the other three years and a half. Since the birth of the younger child she has had one miscarriage. Her menses are profuse. At her husband's instigation she has taken botanic beer for the last two years. She was seized with colic twelve months ago, had vomiting, headache, and constipation, but soon recovered. When I saw her she had just recovered from an attack of colic, which had come on soon after her husband's death. She was pale ; had well-marked blue line on her gums ; no albuminuria. Living in the house with her two children was a domestic servant. The maid, though frequently pressed to take the botanic beer, refused on the ground that she did not like the taste of it. She has remained quite well, and has no blue line on her gums, nor is she anæmic. The elder child has been living most of the time away from home with his grandmother, and has therefore not had many opportunities of taking the botanic beer. He is not distinctly anæmic, and has only the faintest trace of a blue line on his gums. His sister, a child of over three years of age, has lived always at home, and since early in infancy has received daily a small quantity of the botanic beer. She is very anæmic, and has a blue line on the upper gum. This child when I saw her could not talk, nor even walk well. There was a good deal of staggering ; her knee-jerks were absent. Three months afterwards she died in a convulsion. There had been several convulsions. The urine contained albumen.

The use of hair dyes is a source of lead poisoning. A short time ago one of the ballet girls from the Tyne Theatre was admitted into the infirmary under my care suffering from colic headache and amaurosis ; there were retinal hæmorrhages. She had been using a cosmetic containing lead. She recovered. A more striking illustration of the serious effects of the indiscriminate use of lead hair dye occurred in the practice of my friend Mr. C. B. Morgan of Sunderland.[1] It was that of a maiden lady who sought advice because her left eyelid drooped, that she saw objects double, and that for some weeks past she had been gradually losing the power in her arms. There was obstinate constipation. Her mind was perfectly clear. A week afterwards, as she had not improved, Mr. Morgan added iodide of potassium to her mixture. Next morning she was found dead in bed. At the necropsy, Mr. Morgan naturally expected to find some brain lesion, but the most careful examination, conducted by himself and Dr. Ransom, failed to reveal anything abnormal either there or anywhere else. Both these gentlemen were struck by the luxuriant black hair of the corpse. A few weeks after this the niece of the old lady, who had also been struck by the beauty of her aunt's hair, ventured the suggestion that the illness might have been due to the use of a hair dye which the aunt made by mixing sugar of lead and sulphur with another liquid which was unknown to the niece. By its use, Mr. Morgan suggests, may be explained the paresis of the upper limbs, then of the third nerve, and then rapid death following the administration of iodide of potassium, on the theory of Melsens, that a soluble iodide had been formed which is highly injurious. Dr. Macdowell of the Northumberland County Asylum has related to me two cases of lead poisoning arising from the wearing of false teeth the plates of which contained lead ; both patients became insane. Lead poisoning due to the contamination of articles of food was alluded to, and the *colique sèche* of the French navy was shown to be nothing else than lead colic. Dr. Stephen Mackenzie alleges that in the autumn a larger number of cases of lead poisoning is met with than at any other season of the year. The months of June, July, and August have supplied the largest number of cases in the north of England.

As regards the age at which plumbism is most apt to occur it is difficult to say. Children are not exempt. Adults are most exposed to the influence of lead, and therefore suffer most. Whatever doubt surrounds the question of age, there is no doubt as regards the greater susceptibility of the female to be contaminated with lead compared to the male. This is an opinion so totally at variance with that given by several authors that I must explain myself. My experience, drawn from hundreds of cases, is that, both as regards acute and chronic forms of lead poisoning, women are much more quickly brought under its influence than men, and this not simply from the fact that women are more exposed in the factory to greater dangers. It is shown by the statistics of epidemics. In Yorkshire, where, out of 1000 cases of lead poisoning, it was noted to be due to the drinking of water contaminated by lead, the proportion of females to males was as four to one. Brown of Bacup also noticed a preponderance of females affected. Not only is there a sexual, there is also an individual idiosyncrasy to plumbism. There is a class of women very easily affected, but what that type is it is impossible to say. It is the ill-clad and the poorly-fed women who suffer most. They soon break down when exposed to the influence of lead.

Lead as a poison strikes early at the functions of blood-making and reproduction, producing sterility, liability to abortion, and amenorrhœa or menorrhagia. From her constitutional idiosyncrasy, woman is, therefore, more liable to be impressed by lead. Whatever may be the power of sex, of family and individual predisposition, however potent may be the effects of inadequate food and clothing, if there is one thing which most greatly increases the influence of one or other of these as factors in determining lead poisoning, it is alcohol.

Once the individual has suffered from an attack of lead colic or any symptom of lead poisoning, he is launched upon a morbid stream of life where, under the influence of metabolism which is making for health, he may recover ; on the other hand, if he is inattentive or unwilling to regulate the requirements of his constitution by abstinence from alcohol, and again exposes himself, preferring thus to be wafted by the breeze that placed him on that stream, he floats the more rapidly down, heedless of the gulf in which he is so soon to be submerged. Between the first and subsequent attacks there are periods of quiescence ; the first attack predisposes to the second, and the second to the third ; or a first attack is experienced, and, without any fresh exposure, there is—long after, it may be—another outburst. What is the meaning of this? Is it that during the period of apparent health lead has been deposited in some of the organs in an insoluble state, and that as the result of some particular diet, drink, or medicine it has again been rendered soluble, circulates afresh in the system, and for the time being the person is poisoned with lead absorbed from his own tissues?

[1] Transactions of the Northumberland and Durham Medical Society, April, 1877.

ON THE EFFECT OF THE DIVISION OF CERTAIN CONSTITUENTS OF THE SPERMATIC CORD IN THE RADICAL CURE OF VARICOCELE AND OTHER OPERATIONS UPON THE VITALITY OF THE TESTICLE.

BY WILLIAM H. BENNETT, F.R.C.S.,
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IN THE LANCET of Feb. 9th, 1889, page 261, I called attention to an operation for the relief of varicocele differing in important respects from any method previously described. I then stated that in my opinion this proceeding was by far the best means available for dealing with the class of affection for which it was devised. This belief has been strengthened by a considerable additional experience, obtained since the publication of my paper on the subject. An essential detail in the operation, after the vas deferens has been isolated in the customary way, is the application through an incision in the scrotal tissues of two ligatures placed at a distance from each other round the sheath of fascia which contains the spermatic plexus of veins. The portion of the cord lying between these ligatures is then excised. The remaining points in the technique of the proceeding need not be recapitulated, as they have no special relation to my present purpose. The whole of the spermatic plexus of veins, with the exception occasionally of a small vessel lying remotely at the back, are contained within the sheath formed by this fascia, and one object of including it in the ligature is to ensure the obliteration of the whole of the veins; for it is clear that if the ligatures are passed round the connective tissue sheath before the vessels are exposed none of these can escape. Further, if the ligatures are passed in the manner described, not only are the veins with certainty included, but also the main trunk of the spermatic artery, in evidence of which it is my custom, when operating in hospital practice, to demonstrate the existence of a section of this artery in the excised portion of the cord. Two points of interest here arise: First, it is obvious that if the spermatic artery is included in the ligature, as it certainly is under these circumstances, the traditional teaching of the schools that the vas deferens when pushed aside carries the spermatic artery with it is wrong. Practically this is so, for the artery does not go with the vas deferens when it is displaced, but remains either quite close to the spermatic veins, or, as commonly happens in varicocele, is actually surrounded by them. So intimate, indeed, is this relation of the artery to the veins that I believe it to be almost impossible to include the whole of the latter vessels in a ligature in a case of varicocele without also including the artery, unless an elaborate and tedious dissection be undertaken for the purpose. I have therefore little doubt that in the vast majority of operations for varicocele in which the spermatic plexus of veins is divided that the main trunk of the artery is also involved in the section. To this fact no reference exists in the literature of the subject so far as I can ascertain. It is difficult to see upon what anatomical basis, if such exist, this traditional view as to the associated displacement of the vas deferens and spermatic artery rests. It is, however, possible that the belief commonly held that the nutrition of the testicle is dependent almost entirely upon the integrity of the spermatic artery led to the conclusion that in operations in which the spermatic veins were freely divided the artery had escaped injury because no ill effect was necessarily produced upon the testicle. It was then easy to assume that the apparent safety of the vessel was due to its having been pushed aside with the vas deferens. The second point of interest is the effect of this division of the spermatic artery, together with the veins, upon the nutrition of the testicle. The isolated position of this organ, coupled with the accepted view just referred to that its blood-supply depends almost entirely upon the long and slender spermatic artery, has given rise to the impression that its vitality is endangered by the division of this vessel, together with the spermatic plexus of veins, and that section of the spermatic artery, veins, and vas deferens—i.e., virtually the whole cord—is certain to be followed by sloughing of the testis. So strongly is this view held by some practitioners that it is, I believe, not uncommonly taught, in the event of the cord including the vas deferens being divided during an operation, that it is proper to remove the testis at once, not only on account of its having been rendered functionally useless, but especially because if it is left sloughing will surely follow.

Now, with regard to division of the spermatic artery with the veins no harm whatever need result, for the artery of the vas deferens which is certain to have escaped injury is by no means always an insignificant vessel, and generally sufficient by its anastomoses with the spermatic to prevent not only immediate necrosis of the testicle, but also immediate wasting, as it often receives assistance from other vessels which will be indicated presently. In support of this contention I can state without any hesitation that in almost every case of varicocele upon which I have operated a portion of the spermatic artery could be demonstrated in the excised part of the cord, and that in none of these instances has there been the least suspicion of wasting. On the contrary, the testicle when soft or small has invariably become more natural in size and consistence, and certainly in one instance more perfect in a physiological sense. The immediate result of division of the vas deferens with the spermatic veins and artery, whether by accident or of necessity, is naturally to render the testicle functionally useless, as its duct has been severed; but the idea that sloughing of the organ necessarily ensues is certainly not correct, as will be seen from the three examples which follow. (*a*) Some years ago, whilst performing one of my earliest operations for the radical cure of a congenital hernia, I divided apparently the whole cord, including without doubt the vas deferens, the spermatic artery, and veins. My first impulse was to remove the testicle, but, for reasons which I need not enter into, I did not do so. The case progressed rapidly without any sign of inflammatory action; moreover, to my surprise, no appreciable change had taken place in the testis four months after the operation, when the patient was seen for the last time. (*b*) In the course of an operation for the radical cure of hernia, I saw a surgeon of repute and experience divide apparently the whole cord. In this case again the testicle did not slough, and two months after the operation was indistinguishable in general characteristics from the opposite healthy gland. (*c*) I have recently examined a youth in whom I know that the vas deferens and apparently the remainder of the spermatic cord was divided about four months previously in an operation for the cure of a congenital hernia. The testicles remain precisely alike in natural consistence and size. These are remarkable cases and will, I venture to think, repay a brief consideration as to their practical bearing, for I can find no record of any similar instances.

In the pre-antiseptic period of surgery there is little doubt that such an extensive injury to the cord as occurred in each of the above cases would generally have been followed by sloughing of the testicle. Hence the traditional teaching to that effect. The only possible explanation of the survival of the organ after such a serious interference with its vascular arrangement must lie in the fact that there exists a considerable arterial supply over and above that which need be involved in a section of the cord itself. The only available sources of this additional blood-supply are (1) some outlying branches of the spermatic artery, one of which sometimes comes off high up, and so may easily escape division; (2) the artery of the vas deferens, which may not be injured, even though the duct itself be divided; and (3) some small but important anastomotic vessels passing from the subvaginal tissue, which, in cases of congenital hernia, are more than usually large and numerous, in consequence of the modified relation of the tunica vaginalis and the hernial sac. This additional supply, although sufficient under favourable circumstances to maintain adequate nutrition of the testicle, is, however, derived from vessels which are as a rule small and delicate; any inflammation therefore about the part would be sufficient to choke them, sloughing of the organ following as a necessary result. If, however, no inflammation occurs—i.e., if the wound remains aseptic,—the supply of blood is enough to prevent sloughing and subsequent atrophy. The immediate cause, then, of the death of the testicle, which happened in these cases in the days prior to the practice of surgical cleanliness, as the term is now interpreted, appears to me to have been not the mere division of the cord, but rather the inflammation and suppuration, one or both of which almost constantly followed upon it. For my own part, I hold very strongly the view

that the fact of the testicle having been rendered physiologically useless by the division of its duct is no sufficient reason for its immediate removal. On the contrary, there is ample cause for its preservation if there be a reasonable chance, as the instances I have mentioned clearly show there is, of the organ retaining its vitality; for, quite apart from its functional purpose, the testicle should be if possible preserved, not only on æsthetic grounds and in consequence of the esteem in which its existence is held by the majority of subjects, but also in order to prevent the feeling of mutilation suggested by its loss, which in highly sensitive people may be productive of serious mental depression. Again, in the "radical cure" of hernia in candidates proposing to enter the public services, the saving of the testicle, under any conditions, is of special importance, since its sacrifice may raise the question of ineligibility on account of "physical defect," and entirely defeat the object for which the operation on the hernia was performed. Personally, therefore, I should never think of the immediate removal of the testicle under the circumstances now being discussed; indeed, I should go a step further and, if the patient were an adult, or in any other subject with parts sufficiently large, certainly attempt to restore the continuity of the vas deferens by uniting the cut ends with sutures, which is not difficult, as may be demonstrated in the cadaver.

The principal points to which I wish to call attention in this communication may be conveniently summed up in the following conclusions, which, although in several respects opposed to what is commonly taught, I believe from experience to be perfectly sound:—1. That the vas deferens having been displaced in the manner usually adopted in operations for varicocele the spermatic artery does not accompany it, but remains with the spermatic veins. 2. That in cases of varicocele the division of the main trunk of the spermatic artery, together with the veins, if the ordinary principles of surgical cleanliness be observed, is not only harmless to the testicle, but probably aids in the ultimate relief of the affection by diminishing the pressure of blood going to the testis at the time when almost all the returning veins are suddenly obliterated. 3. That the division of the vas deferens, spermatic artery, and spermatic veins, which entails a section of apparently the whole cord, is not necessarily followed by sloughing, or even subsequent wasting of the testicle, provided that a perfectly aseptic condition of the wound is maintained.

ALOPECIA AREATA, ITS PATHOLOGY AND TREATMENT.

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(*Concluded from page 480.*)

HITHERTO I have discussed the negative evidence of a universal neurotic theory, and I hope I have shown that it is inapplicable to a large proportion, perhaps as much as nine-tenths, of the cases. I propose now to examine the positive evidence of the only other possible hypothesis—viz., the parasitic theory. This I must admit *in limine* has many weak links in the chain of evidence; had it not been so, the matter would have ceased to be one of controversy long ago.

First, let us examine as to the evidence of contagion. Here, again, much of it rests on the patient's statements or opinions, but while individually many of the instances I am going to relate are not very conclusive, cumulatively they have, I think, some value. I shall take first the private cases where inquiry was most thorough:—A man aged twenty-seven stated that it came on eight days after wearing a theatrical wig. A lady ascribed it to the servant using her brushes. A man aged fifty-five stated that it came on soon after having had his hair cut by a country barber. A man aged twenty-three worked alongside of a man who also had it. A lady aged fifty stated that hers began soon after sleeping for three weeks with a married daughter who was suffering from it, who ascribed it to sleeping with a lady who had been quite bald from childhood. A man aged thirty had a brotner who also lost all his hair, which has now regrown. In a man aged nineteen; his father has also had it for twelve years. In a girl aged seven; her brother has a small bald patch; the patient has the characteristic ! hairs. A woman aged forty dates the disease from having her hair cut by a barber. A man aged twenty-eight said that his brother had it when he was eight years old, and he himself had a single patch about the same time; when I saw him the face and scalp were almost bare. A man aged twenty-nine said that the disease was of fourteen years' duration altogether, though his hair had regrown several times. The mother, who has dark hair, first had it, then the patient, who also has dark hair, and then his younger brother, also with dark hair. The father and sister, who have fair hair, have not had it. This is not a solitary instance with regard to dark-haired people; it has even been asserted that it occurs exclusively among dark-haired people. This, however, is certainly not true. I have repeatedly seen it among fair-haired persons of both sexes, but I am inclined to believe that it is more common in dark-haired persons. There is, however, a close relationship between alopecia areata and tinea tonsurans. One of the first patients who apprised me of this fact was a medical man who came to me with a bald smooth spot on the side of the chin. He stated that he had been treating some cases of ringworm, and had a habit of rubbing his own chin with his finger at the spot which had become bald. On pulling out some of the hairs round the patch, in one, unmistakable fungous elements like those of tinea tonsurans were observed. Many cases corresponding with this have since come under my notice. In a schoolmaster, a perfectly healthy man, who had been personally treating ringworm in some of the boys of his school, smooth bald spots appeared in his whiskers, in some of the hairs of which I found fungous spores. In spite of treatment other patches formed in the scalp, and gradually denuded nearly the whole scalp, eyebrows, and lashes. Recovery was very incomplete, and after a long course of treatment he deserted me for other advice. Two years and a half after her father had been affected, his little daughter, aged three years, came under my care with two perfectly bald patches with some ! hairs. She had, however, been also with a little boy who had had ringworm, but was said to be cured. I did not succeed in finding any fungus in this case, but I only made one examination. Another little girl of three, who had played with another patient of mine who had ringworm, was brought to me with smooth bald patches and ! hairs. But I will defer relating any more such cases in children, as it will be said that these are the cases we all recognise as the bald form of tinea tonsurans. Without denying this I will only remark that they are often absolutely indistinguishable from alopecia areata, possessing the straight ! hairs of that affection, and not the bent and twisted ones of ordinary tinea tonsurans. A lady nurse aged thirty-five had tinea tonsurans at the nape just where the hair commences. I got her apparently well with some difficulty, and a month or two later she came with a patch of alopecia areata on the temple. Another lady about thirty came with a single patch of alopecia areata, which she had noticed two days. She wanted to know if it was ringworm, as she had recently been in contact, though not very closely, with a child affected with ringworm. Quite recently a medical man practising in the West Indies came to me with alopecia areata of the beard and whiskers of nine months' duration. He was physiologically bald to a considerable extent on the scalp, and he stated that three years previously he had had his hair cut by a negro barber, and within a few days distinct rings of tinea circinata appeared on the bald part of the scalp; and, although with mercurial applications he had removed it apparently, it had recurred again and again. All these were in private practice, but for some of the cases I have gone outside the first fifty cases of alopecia which I took for comparison with the hospital cases.

Among hospital cases one was a woman who was bringing her son to the hospital for ringworm, and who, after attending for some time, showed me a bald smooth patch on the side of her head. Another was a girl of seventeen, who had disease on the right temple. She stated that she had been working with a girl who had ringworm of the face, and the bald patch on her head appeared soon after. A man aged twenty-two, who had some occipital patches, stated that his brother's child, with whom he had been in contact, had had ringworm, though it was supposed to have been cured for more than a year. I could relate many instances of smooth

bald patches in children with ! hairs who had been in contact with ringworm; but I know it will be said of them that these are merely instances of bald tinea tonsurans, and I will only mention one family of eight children who, while at seaside lodgings, developed small bald patches; they then heard that in the previous season several children with ringworm had been in the same lodgings. I do not wish to lay any stress upon this, but after a time the governess, aged twenty-four, observed three pea-sized bald spots on her own head. She went to her home, and the doctor there told her that it was alopecia areata, and not contagious; she therefore slept with her adult sister, who soon after showed similar spots on her head. The mother of the children, when she came to me, had a bare spot half an inch in diameter in the occipital region; it had been noticed three weeks; there were no ! hairs, but the hairs round were loose, and on one of them from the border of the bald patch were spores of the appearance and size of those of tinea tonsurans. Hillier's cases are well known. In a parochial school of 1100 of both sexes the outbreak occurred suddenly in forty-three girls of one block in which one girl had had it for some time. To complete the chain of evidence I must allude to certain instances of tinea tonsurans, with regard to which I will only make statements. First, briefly, then, I have repeatedly seen cases of ordinary ringworm of the head with characteristic bent hairs, which after being treated for some time change into smooth bald spots with the straight ! hairs of alopecia areata. That smooth bald spots occur *ab initio* which it is acknowledged are of the nature of ringworm, even by ardent advocates of the universal application of the neurotic theory, is an acknowledged fact. In one family in which several were attacked there was a strong reason to believe it was originally contracted from a horse with ringworm. In some of this class of cases the patches are very small, from a hempseed to a large pea in size, while in others they are of the ordinary size and aspect of alopecia areata. These small spot cases usually remain small to the end, recover very slowly as a rule, and are not depressed like Neumann's neurotic form. I have, I trust, shown that this fourth class of alopecia areata is to a limited extent contagious under favourable conditions, though far less so, of course, than tinea tonsurans, as its clinical symptoms would lead one to infer on *a priori* grounds. Secondly, that cases with all the signs of ordinary alopecia areata arise not in children only, but in adults from contact with ordinary tinea tonsurans. Thirdly, that not only may tinea tonsurans commence in a bald form, but that cases which have begun in the ordinary way may be converted into alopecia areata in children.

It follows, then, from all this, that the two forms of disease may be interchangeable in childhood, while in adults practically we see only the one, or bald form, and the question forces itself upon us, therefore, Is not alopecia areata in the majority of cases not only non-neurotic but parasitic, and is not the parasite that of trichophyton tonsurans? This would account for the otherwise curious fact that, while ringworm of the head is so common in children, it disappears after puberty, and may this not be because the hair alters in its consistence, and the fungus is no longer able to penetrate into its substance, but passing down between the root-sheaths separates the hair from its nutritive supply and so leads to its atrophy and gradual extrusion? It may naturally be asked, Why, then, cannot the fungus be found, except by a very favoured few who do not agree as to its characters? I believe that it can be so demonstrated in recent cases, if rightly looked for. It is no use looking on the bald places themselves, it is no use looking in atrophied ! hairs; the fungus is never in the shaft, but on it or the attached epithelium. The best way is to pull out a good many of the loose hairs at the border of the bald area, then to examine these with a lens, and select those hairs which have most root-sheath attached, rejecting those with smooth atrophied roots, and then, taking the selected hairs, cut off the greater part of the superfluous shaft, soak these root ends in liquor potassæ or a saturated solution of caustic potash in glycerine, and examine the portions of epidermis attached to the shaft; it should not be manipulated too much, or the affected part may get detached from the shaft and be lost. The fungus is always in small foci, and perhaps only in one of several selected hairs; sometimes it may be seen at the very extremity of the root, as if it had worked round and separated the hair from its papilla. In most recent cases, in my opinion, its presence can be conclusively shown with a sufficiently careful search, but I have found it more easily in hairs from the beard than those from the scalp. It is worthy of notice that alopecia areata is most common where tinea tonsurans is most common, and it is also instructive to observe that the neurotic theory is most strongly held in those countries, such as Germany and America, in which both ringworm and alopecia areata are comparatively rare. The old-fashioned tinea decalvans was an acknowledged entity until the great Hebra, who did so much to sweep away the myths of dermatology, swept poor tinea decalvans away with the rest and placed it along with other forms of alopecia areata among the tropho-neuroses; but while alopecia areata constitutes less than 1 per cent. in Vienna, ringworm of the head is infinitely rare. In answer to an inquiry, his son, Dr. Hans Hebra, kindly informed me that of 15,000 cases in his policlinique only 196 were cases of ringworm, and in only 14 of these was it in the head—not 1 in 1000, therefore; while in my hospital practice it constitutes fully 10 per cent. Clearly there is something in Vienna scalps unfavourable to trichophyton tonsurans fungus, and alopecia areata exists in only 0·6 to 0·7 per cent. in the same clinique. In France, on the other hand, where alopecia areata is commoner even than with us, a parasitic origin and a limited capacity for propagation are generally acknowledged, and had I not been obliged by the limited time at my disposal to confine myself to cases in my own experience, I could have strengthened my argument much from the interesting cases related in the excellent recent monographs on Pelade by Besnier, Leloir, and Dubreuilh, who relate extensive outbreaks amongst soldiers and firemen. The percentage of alopecia areata in different countries is approximately as follows: France, 3 per cent.; England, 2; Scotland, 1·5; Vienna, 0·75; North Germany, 0·75 to 1; America, 0·5.

With regard to the treatment, I rely most on blistering the early patches, painting on the liquor epispasticus in three coats, allowing each to dry before the other is applied. At a later stage those parasiticides, which are also powerful stimulants, give the best results in my hands. It is true that such applications fit either theory, but they are none the worse for that. The loose hair round the patches should first be pulled out, and, where practicable, from half a drachm to one drachm of chrysarobin to one ounce of lanoline and oil is one of the best applications; but owing to the erythema it is liable to excite, the indelible staining of linen and the discolouration of the hair, it can only be used in a small proportion of cases. A cleaner and universally applicable remedy, even for the face, is two to five grains of perchloride of mercury, one drachm of rectified spirit of wine, to seven drachms of oil of turpentine. The smaller proportion of perchloride of mercury should first be tried, and the strength increased as the patient can bear it. Of course it produces some burning and stinging of the skin, but this is inevitable in all really efficacious remedies. It should be rubbed in with the finger, not only on, but round the patch, night and morning. Internal medication is not of any use, except in the late stage when the disease is not spreading, but only the dormant vitality of the injured hair follicles requires awakening, then I think pilocarpine may be given with advantage internally in the proportion of one-sixth to a quarter of a grain at bedtime, and I find it acts most surely when given in solution. Where circumstances permit, hypodermic injection of pilocarpine is still more efficacious. One-tenth to one-sixth of a grain may be given. It is not wise, however, to administer it except at the patient's house, as in some subjects it produces vomiting and faintness. Of course, if I find any defect in the patient's health, I endeavour to rectify it, but I do not think it exercises any influence on the course of the affection.

Let me, in conclusion, sum up what I have said in the following propositions:—At least four classes of cases are recognisable under the term "alopecia areata." In the first are universal cases, usually of rapid development, and not necessarily in patches. In the second are those cases with one or more patches in the course of a nerve, or on the site of an injury. In the third are cases with small atrophically depressed patches, which Neumann called "alopecia circumscripta." In the fourth are cases of the common type in patches or bands of irregular distribution, and with characteristic ! hairs at the border of spreading patches. The first three classes are undoubtedly of tropho-neurotic origin, and the fourth is parasitic, and forms the largest proportion of the cases. With regard to the fourth class

the preceding facts show:—1. That this form is to a limited extent contagious, and that from time to time limited outbreaks have occurred in small communities. 2. That not only children, but adults who have been in contact with tinea tonsurans sometimes develop bald patches indistinguishable from alopecia areata. 3. That in tinea tonsurans commencing in the typical way the typical crooked stumps may both spontaneously and under treatment disappear, and the patches develop into an alopecia areata condition with ! hairs. 4. That in those countries where tinea tonsurans is most common alopecia areata is also most frequent. 5. Hence we must conclude that a large proportion of cases in adults which are termed alopecia areata are cases of bald tinea tonsurans which is acknowledged to exist amongst children, and that the old authors, from Bateman onwards, were justified in calling it porrigo or tinea decalvans. 6. Finally, I believe that a parasite indistinguishable from the trichophyton tonsurans fungus may be demonstrated in recent cases, and the treatment most efficacious is inunction of powerful and stimulating parasiticides.

THE DIAGNOSTIC VALUE OF THE PHYSICAL SIGN "TRACHEAL TUGGING" IN THORACIC ANEURYSM.

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IN 1878 the following remarks, by Surgeon-Major W. S. Oliver, M.D., appeared in THE LANCET:—

"As the diagnosis of thoracic aneurysm of the aorta is often difficult and obscure, notwithstanding the various physical means we have now at our disposal for detecting it, I am desirous of mentioning a method of examination which has afforded me material assistance in diagnosing this disease (or even simple dilatation of the vessel) when it occurs, as is most generally the case, either in the ascending or first part of the transverse portion of the arch. The process is as follows:—Place the patient in the erect position, and direct him to close his mouth and elevate his chin to the fullest extent, then grasp the cricoid cartilage between the finger and thumb, and use gentle upward pressure on it, when, if dilatation or aneurysm exist, the pulsation of the aorta will be distinctly felt transmitted through the trachea to the hand. The act of examination will increase laryngeal distress should this accompany the disease."

Since the publication of the above remarks this physical sign, which came to be known as "tracheal tugging," has been sought for in the medical wards of the Montreal General Hospital, and its great importance was early recognised by my teacher and predecessor in the chair of clinical medicine, Dr. George Ross. Tracheal tugging was always found to be a reliable sign of aneurysm of the transverse arch, and in one case it was the only positive sign present of an aneurysm whose existence was subsequently made evident by well-marked signs and symptoms of the disease. In all the cases of aneurysm of the aorta published in journals or in society proceedings either by Dr. Ross or by myself, the presence or absence of tracheal tug was carefully noted. On several occasions, too, Dr. Ross has drawn attention to its value, notably in his article on Thoracic Aneurysm in Wood's "Reference Handbook of the Medical Sciences":—

"Another physical sign of very great diagnostic importance, and which is also to be obtained by the educated sense of touch, is what is now known under the term 'tracheal tugging.' It is but quite lately that attention has been directed to this method of examination, and it is only now that its value has been realised. ..... If a deep-seated aneurysm be present which impinges at all upon the trachea or one of its principal divisions, then a very distinct and unmistakable *tugging downward* will be felt with each systole of the heart. When the heart is acting strongly, or when aortic incompetence is present, considerable rhythmical pulsation may be communicated to the fingers from the adjacent carotids, but with a little care this cannot be mistaken for the tugging directly downward above described. I have observed a number of cases of thoracic aneurysm, cardiac and other thoracic diseases, with reference to this sign, and I have never observed it produced by any other condition but aneurysm."

The author of the article Thoracic Aneurysm, in Pepper's "System of Medicine," refers to Dr. Oliver's directions as to the mode of examination for "tracheal tugging," but he does not mention his own opinion of its value. Beyond these two references I am unaware of there being any mention of this physical sign in any treatise on thoracic disease, British or foreign. Nor have I found that the sign was looked for in any hospital I have visited either in England or the United States, except in the medical wards of the Johns Hopkins Hospital, where Drs. Osler and Lafleur, old pupils of the Montreal General Hospital, have carried some of the results of their clinical teaching with them. In the discussion on the diagnosis and treatment of aneurysm of the aorta at the Medical Society of London on Dec. 9th, 1889, "tracheal tugging" was not mentioned—in fact, it appeared to be quite unknown. As to the mode of eliciting this physical sign, I have nothing to add to the directions given by Dr. Oliver. In some cases the movement of the box of the larynx is so distinct that the pulse can be counted simply by placing the tip of the forefinger upon the pomum Adami, and making a slight upward pressure.

With the object of forming a just estimate of the value of the tracheal tug, I have collected the histories of all the cases of thoracic aneurysm recorded in the case-books of the Montreal General Hospital since 1878, omitting those in which the absence or presence of tugging was not definitely noted. This period embraces the service in the medical wards of Drs. Osler, Ross, Wilkins, Molson, and myself. Twenty-three such cases are upon our records, and to this series I have added the histories of two cases observed in private practice. With these twenty-five cases I shall attempt to prove a series of statements regarding the significance of tracheal tugging as observed in the light of our clinical experience at the Montreal General Hospital.

1. *Tracheal tugging is never present except in aneurysm.*—Though I have repeatedly examined patients who were suffering from other diseases, as well as those who were suspected of having aneurysm, with a view to testing the truth of this statement, I have never found the tug perceptible. In a case of Hodgkin's disease, where there were enlarged glands in the thorax causing a pressure upon the trachea, which could plainly be seen with the laryngoscope, and in which there were other signs of pressure—dilated pupil, unilateral sweating of the face, unilateral epistaxis, and accelerated pulse-rate, all pointing to pressure upon the sympathetic in the root of the neck,—I could detect no tug.

2. *When tracheal tugging is present the aneurysm is so situated as to press from above downwards on the left bronchus, or upon that portion of the trachea immediately adjacent to it.*—To understand thoroughly the mechanism of tracheal tugging a careful study of the relations of the transverse aorta in a cross section of the frozen chest should be made. The plates of Braune or of Dwight are also very instructive. The length of the transverse arch is not great, and the direction of its course is almost directly backwards from the upper border of the second right costal cartilage to the upper part of the left side of the body of the fifth dorsal vertebra. The transverse aorta rides on top of the root of the left lung, lying between the left bronchus and the trachea. An enlargement of the bloodvessel, be it ever so small, will press upon the bronchus or upon the trachea at the root of the bronchus, and impart its pulsation to the air tube. At each beat it would push the bronchus down, and this downward push would necessarily be felt by the trachea and the larynx.

In seventeen out of twenty-five cases tracheal tugging was noted. What part of the aorta was involved in these seventeen cases, and on what part of the trachea did the aneurysm press? A necropsy was obtained in eight of these cases. Seven were hospital patients, and one was a private patient. In six there was distinct pressure upon the left bronchus from above. The most convincing case is one of Dr. Molson's (Case 1), in which the aneurysm, after pressing upon the left bronchus, caused a fatal hæmoptysis by opening into it. In Case 2, which I closely watched myself, the tumour as seen *in situ* distinctly pressed down upon the left bronchus. In Case 4 there was no pressure at all on the trachea, but only upon the left bronchus. The main features of these cases are as follows:—

CASE 1 (Dr. Molson's patient).—James G——. Tugging present. Other evidences of aneurysm of the transverse arch, including paralysis of the muscles of the left side of the larynx.—*Necropsy:* A rupture of an aneurysm the size of a small orange into the left bronchus.

CASE 2[1] (Dr. MacDonnell's patient).—H. G——. Tugging well marked. Other evidences of aneurysm of the transverse arch, including paralysis of the muscles of the left side of the larynx, contraction of the left pupil, weak breathing in the left lung, almost complete obliteration of the left radial pulse.—*Necropsy:* An aneurysm the size of a small orange pressed directly upon the left bronchus into the angle between it and the trachea.

CASE 3 (Dr. Ross's patient).—William H——. Tracheal tug present. Evidences of aneurysm of ascending arch, including perforation of sternum. The patient left the hospital, and died two years later at his home in the country.—*Necropsy:*[2] A large aneurysm occupied the whole of the transverse arch extending from the sternum to the vertebral column, and pressed upon the last inch of the trachea and left bronchus.

CASE 4[3] (Dr. Ross's patient).—Tracheal tugging present. Cough, dyspnœa on exertion, pain in chest and left arm, slight dulness and loss of vocal resonance on upper left front. Marked weak breathing at left base. No inequality of pupils.—*Necropsy:* A saccular aneurysm between the trachea and ascending aorta. "Immediately behind the right half of the sac is the bifurcation of the trachea, and the left bronchus passes along the posterior wall just opposite to the mouth." The trachea was not compressed. The condition of the larynx not noted. Here tracheal tugging is associated with downward pressure on the left bronchus.

CASE 5[4] (Dr. Ross's patient).—Tracheal tugging present. All the other symptoms pointed to innominate aneurysm. Pain in the top of the right shoulder, extending up the neck to behind the right ear. Voice husky; respiratory stridor. Pulsating tumour above the right sterno-clavicular notch. Pupils unaffected. Paralysis of right vocal cord. The presence of the tug clearly indicated that the transverse arch was involved, *for tracheal tugging is never found when the innominate is above the seat of aneurysm.* At the necropsy, the aortic arch uniformly dilated and of large size; projecting from it, just before the innominate is given off, is an aneurysmal dilatation about the size of a walnut, somewhat conical in shape, which passed by the side of the innominate and occupied a position immediately behind the sterno-clavicular articulation. The lower lobe of the left lung was hepatised.

CASE 6 (Dr. MacDonnell's patient).—Hugh M——, tracheal tug present. Aneurysm was thought to involve the innominate artery. The symptoms began with pain on the right side of the head and neck extending to the back of the right ear. Extreme varicosity of the thoracic and abdominal veins. Brassy cough. Pulse on right side is weaker than on the left. Pupils equal; paralysis o the muscles of the right side of the larynx. Here the only symptom which indicated an extension of the disease to the aorta was the tracheal tug. Had I valued it properly, I might have made a better diagnosis. At the necropsy a large aneurysm was found to have involved the whole arch extending from the sternum to the vertebral column and pressing up on the innominate artery, thereby shutting off the blood-supply to the upper extremity. The superior vena cava was also pressed upon.

CASE 7 (Dr. Molson's patient).—Anthony G——, a negro. Tracheal tugging. Pains in back and right arm. Trachea evidently obstructed. Pupils unaffected. Right radial pulse somewhat weaker than the left. Strong pulsation in episternal notch and a heaving impulse limited to a small area under the right sterno-clavicular articulation. The breathing generally impeded, but there was no difference perceptible at the bases of the lungs. Condition of larynx not noted. Death from dyspnœa.—*Necropsy:* The sac compressed the trachea and eroded the fourth and fifth dorsal vertebræ, being formed entirely upon the transverse aorta, the ascending portion being tolerably normal.

The following case is not so conclusive as those which precede it. The notes of the necropsy are not to be found. It is stated in the clinical case-book that the aneurysm was situated upon the ascending arch, but no mention is made of the condition of the transverse arch, or of the relations of the trachea to the tumour. The particulars are as follows.

CASE 8 (Dr. Molson's patient).—Andrew J——. Tracheal tugging. Burning pain in the middle of the sternum. Stridor. No evidence of tumour, except rather well-marked visible pulsation at the right of the sternum at the junction of the third costal cartilage wtth the sternum. A brassy cough, relieved by lying upon the face. Death occurred by rupture into the trachea and consequent hæmoptysis.

In the remaining ten cases no necropsy was obtained. The clinical evidence in favour of the existence of aneurysm of the transverse arch is very strong, particularly in Cases 7 and 8, where there was pain in the left shoulder and arm, together with tumour to the left of the sternum and paralysis of the muscles of the left side of the larynx; and in Case 8 additional evidence was afforded by the weakened breath sounds in the base of the left lung.

CASE 9 (Dr. Ross's patient).—James McG——. Marked tugging. Pupils unaffected. Pain in left shoulder, back of the neck, and left axilla. Dull area to left of sternum under the inner end of the clavicle. Paralysis of the muscles of the left side of the larynx.

CASE 10 (Dr. Ross's patient).—Patrick T——. Tugging present. Pupils unaffected. Pain in left shoulder. Evidences of tumour to left of sternum. Weak breathing in the base of the left lung. Paralysis of muscles of the left side of the larynx.

In the following series the evidences of aneurysm of the transverse arch are not so clear as in the preceding cases.

CASE 11 (Dr. MacDonnell's patient).—James G——. The tracheal tugging is very distinct, and has a direction downwards and to the right. Pupils unaffected. Tumour behind right sterno-clavicular articulation, which can be felt pulsating at the sternal end of the subclavian triangle. The tumour can be felt to move with the act of swallowing. The larynx is unaffected. The lumen of the trachea is not pressed upon. The physical signs observed in connexion with this case show that tugging may be present without any pressure upon the trachea. The movement of the tumour with swallowing is due to the lifting up of the tumour by the left bronchus, and is an additional proof that tugging depends on pressure on the left bronchus from above. I shall attempt to explain later on how a tumour may give rise to tug, and yet leave the recurrent laryngeal nerve unaffected.

CASE 12 (Dr. Ross's patient).—Frank G——. Tracheal tugging. The evidences of transverse arch disease were pain in left side of the chest and enlargement of the cervical and thoracic veins on the left side. This patient died in a paroxysm of dyspnœa. No necropsy.

CASE 13 (Dr. Ross's patient).—J. B——. Tracheal tugging. The evidences of an aneurysm of the transverse arch were contraction of the left pupil, and pain in back of the neck. Tumour in centre of chest; dulness and bulging behind the upper piece of the sternum.

CASE 14 (Dr. Molson's patient).—G——. Tracheal tugging. Pupils unaffected. Pain in back of neck and down the right arm. Tumour in centre of chest, behind manubrium. No difference in the breath sounds of the two lungs. Distension of cervical and upper thoracic veins.

CASE 15 (Dr. Ross's patient).—McD——. Tracheal tugging. Pupils unaffected. Pulsating tumour to right of sternum under the clavicle. No difference in the breath sounds of the two lungs.

CASE 16 (Dr. Ross's patient).—Elizabeth O——. Tracheal tugging. Pupils unaffected. Pain in the middle of the sternum, between shoulders and down the arms. Tumour in the centre of the chest. Weak breathing at the base of the left lung.

(To be concluded.)

[1] Reported fully in the Medical News, Feb. 15th, 1890.
[2] I am indebted to my former pupil, Dr. J. E. Orr, of Cookshire, P.Q., for the detailed report of the necropsy.
[3] Canada Medical and Surgical Journal, vol. viii., 1878, p. 241.
[4] Ibid., vol. viii., p. 451, and vol. ix., p. 20.

A NOTE ON THE BONE LESIONS (USUALLY INSIDIOUS) OF MAMMARY CARCINOMA.[1]

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I THINK it will be generally admitted that the clinical course of carcinoma in the female mamma is frequently obscure and mysterious. That the two phenomena, in particular, of an occasional long interval of seeming immunity after operative measures, followed by renewed manifestations of disease,—of a similar growth in the opposite breast, after a more or less prolonged period of health, and often purporting to be an independently developed tumour,—make

[1] A paper read in the Section of Pathology at the Birmingham meeting of the British Medical Association.

this particular variety of malignant neoplasm a *crux* in the path of those who, like myself, are convinced—from the analogy of all the other species, as well as from clinical observation—that the developments of cancer are consecutive and infective. In this paper I attempt an elucidation of the mystery, although my investigations are far from complete, and I have to ask the indulgence of the Section for their fragmentary character.

I need hardly remark that carcinoma of the mamma is the result of abnormal proliferation of the acinar epithelium—a process ordinarily *chronic* and insidious, and giving birth to the familiar "scirrhous cancer." When, however, as happens in a substantial minority of cases, the malady runs an *acute* course, the resulting tumour formation may aptly be termed "soft, encephaloid," or "medullary carcinoma." The two, however, are practically identical; every gradation of acuteness or of chronicity is observable in individual examples; and both the clinical and histological differences between specimens at opposite extremities of the scale are plausibly explicable by the variations, which we are daily called on to notice, in the consistence of the fibrous tissues of respective individuals. However this may be, the point here in question is of some consequence in the present connexion, because, if I am not greatly mistaken, there is a tendency to classify soft, rapidly advancing growths of this region as sarcomata; partly by reason of the inconspicuous gland infection often manifest under such circumstances, partly because very careful examination of their sections taken from several portions of the periphery is often needed in order to demonstrate the acinar arrangement and epithelioid origin of the cells. I have not noticed any bone symptoms in a true sarcoma whose connective tissue origin could be definitely traced.

Every surgeon must be familiar with the so-called "rheumatic" pains which torment the latter days of most or all scirrhous patients. The *upper arm* on the same side as the disease, the corresponding *scapula*, and the *lumbar region* are their most usual seats specially referred to by the sufferer, but hardly any portion of the body in the neighbourhood of bone may not be complained of. A certain amount of subjective localisation thus takes place. The patient often speaks of universal and overwhelming sensations of painful weariness and lassitude out of all proportion to the objective manifestations of disease in the shape of tumour or of palpable secondary deposit, and often present when the latter is entirely wanting. The local pains are described as gnawing and as deep-seated, as being felt in the bones rather than in the soft parts. Like those of true rheumatism, they are often worse at night, and are also greatly relieved by the administration of salicylates—a point I am disposed to attribute to their origin in irritative conditions of the periosteum. They are not, however, specially confined to the neighbourhood of articulations; they are referred to the bone; are fixed, not metastatic and transitory. By far the most conspicuous point of distinction from true rheumatism lies in the concurrent and progressive muscular weakness. Except in so far as it may be propped up by medicinal measures of treatment, the general health steadily and rapidly breaks down; the patient becomes wan, pinched, and sallow, and her physical condition may be not inaptly designated by the almost obsolete term "cachexia." In rheumatism all the symptoms are usually subjective. In the state here described we have the most unmistakable objective evidence that grave organic lesions exist somewhere, and are surely sapping the springs of life; although, as not seldom happens, we find few outward manifestations of cancer growth during life, and after death an amount of visceral deposit entirely inadequate to account for the phenomena.

Now, so far as my opportunities of investigation have extended, the concrete basis underlying these symptoms is an infection of the bone marrow by malignant cells derived from the primary growth, or from some of its secondary tumour formations. With perhaps greater respect for the clinical acumen of our forefathers than is universally current nowadays, I take it that the "cancerous cachexia," on which they were wont to dwell in this connexion, actually denoted the fact of such infection, mingled, it is true, with the result of the ulcerative and septic processes commonly, but not invariably, met with in cancer. From the analogy of similar tissues elsewhere it is *primâ facie* obvious that the marrow, richly cellular and abundantly supplied with lymphatics and bloodvessels, must almost of necessity form a particularly favourable soil for the development of cancer cells, should these once gain access to it, as also for their diffusion by means of the general circulation. The phenomena of extensive diffusion seen in cases of primary malignant growths on bone may be pointed to as countenancing the latter statement. And, in the second place, in the light of current views of this structure as the *great red-corpuscle factory* of the organism, we can readily comprehend the marked physical weakness and steady progress down hill obvious whenever the "rheumatic" pains of mammary carcinoma—I am not aware that they are commonly associated with any other variety—are felt in any great degree.

The recorded symptoms and morbid appearances of many cases of "osteo-malacia" seem to indicate that this should rank as a truly malignant disease of the bone marrow. Professor Huxley makes the following remarks upon an allied topic. The italics are the writer's own: "This circumstance enables us to understand that which one would hardly suspect from the appearance of a bone—namely, that *throughout life*, or at all events in early life, its tissue is the seat of an extremely active vital process. The permanence and apparent passivity of the bone are merely the algebraical summation of the contrary processes of destruction and reproduction which are going on in it."[2]

If we examine the shoulder-joint and its vicinity in a person dead from breast scirrhus, in whom "brawny œdema" of the adjoining arm is a conspicuous feature, we commonly find it difficult or impossible to disarticulate the head of the humerus from the glenoid cavity in the ordinary manner. Hardly any calcareous salts seem to be left in the bone matrix; and the knife passes through the upper epiphysis, where the condition is most marked, with little or no more resistance than through the soft parts. It might be supposed that this phenomenon is due to the general absorption of lime-salts occasionally met with in other chronic wasting diseases, particularly in connexion with insanity. In my experience, however, it is associated with an actual deposit of malignant cells in the marrow. Individually, these are distinguishable from osteo-clasts by the relatively huge nuclei; collectively they, if degenerative processes have not proceeded too far, present the acinar distribution specially characterising mammary carcinoma. The fine adipose tissue reticulum seen in sections of healthy marrow is absent; everywhere we find indications of absorption and of erosion of the bone matrix (such as myelo-plaxes and Howship's lacunæ), seemingly by the proliferating cells of the new growth; the cancelli are occupied by masses of parenchyma, apparently malignant, but often more or less degenerate, and breaking down into granular débris. This state of soft decalcification is only apparent as a rule in the humerus, sternum, and ribs adjoining the primary growth — parts where the cell growth is presumably most abundant. It is but relatively very exceptional to encounter a distinct *tumour* in the bones, the result of secondary deposit in the course of breast scirrhus; and the cases in which *fracture* takes place are also comparatively rare. Yet I believe I may assume that failing the one or the other of these two occurrences, the state of the bones does not ordinarily receive attention at a necropsy; is certainly not tested by the microscope. Thus to take the specimens of such deposit in the long bones contained in the Museum of the Royal College of Surgeons, which are derived from four patients. No. 1670, vol. ii., part 4, is a preparation of the condyles of a femur, filled "*without any change of form*," by the malignant parenchyma. Here there had been no tumour or fracture; but attention had been called to the part by local pain, swelling, and knee-joint effusion. No. 1671: Head and upper part of femur in like condition. *Fracture* had taken place. "*Form of bone scarcely altered.*" No. 1672: Humerus, filled with secondary scirrhous deposit, *fractured*. "*Shape of bone scarcely altered.*" No. 1675: Humerus, similar to last, *twice fractured*. No tumour.

I beg to exhibit drawings of the appearances in several of these cases, and also the slides themselves. Most are from the upper epiphysis of the adjacent humerus after death from breast scirrhus; in one, which I regard as a specially test case, seeing that not only were objective bone symptoms absent during life, but that death took place from cerebral and pulmonary complications long before it might have been expected from the malignant growth alone, deposits of scirrhous cells, arranged in acini, were

[2] Elementary Physiology, 1886, p. 334

found in both humeri and in one of the lumbar vertebræ. There are two sections of marrow taken from the shaft of the femur in a case some years ago under the care of my colleague (Dr. Purcell), to whom I am indebted for kind permission to quote particulars. Here multiple tumours on

the bones, secondary to an encephaloid carcinoma of the left breast, existed, but, as may readily be seen by the outlines of the section, no tumour formation was present at the spot. The section was taken, in fact (as I did not then suspect this infection phenomenon), as a specimen of normal marrow, and the small groups of scirrhous cells discovered by accident only. There is a slide of secondary deposit, subsequently to excision of the left mamma for scirrhus, in the bodies of the sixth and seventh cervical vertebræ; but as here, although no distinct tumour was produced, marked objective phenomena, and death from paraplegia, ultimately resulted, the case is, to some extent, foreign to the main purport of my paper. Particulars of these are given in the appendix. The recognition of this actual deposit of malignant cells in the bone marrow is useful in enabling us to comprehend the cachexia and general mal-nutrition, out of proportion to the palpable amount of disease present, the infection of the opposite breast which takes place in a certain percentage of instances, and the renewed manifestations of tumour development after several years of seeming immunity procured by operation.

It remains briefly to glance at two of the early *objective* indications of the occurrence, which are not without importance to the practical surgeon. These are:—1. A sensation of fulness and enlargement, sometimes accompanied by tenderness on pressure, afforded by the upper epiphysis of the *humerus* nearest to the diseased mamma. 2. A marked thickening and prominence of the *sternum*, affecting especially the part between the articulations of the first and third ribs. The first of these was described by myself in THE LANCET, vol. i. 1880, p. 912. I am not aware that it had been pointed out by any previous observer. At a comparatively early stage in the course of breast scirrhus (long anterior to any œdema of the soft parts) the humerus on the side of the disease becomes slightly thickened and seemingly flatter and less rounded than in health. Occasionally the bone is tender to the touch; but more frequently hyperæsthesia is absent, at least in any marked degree; and occasionally again the part may be sore on pressure without manifest enlargement. Sometimes, but very seldom, the woman complains of aching "rheumatic" pains about the shoulder and down the limb; as a rule, at the early stage to which I refer, no subjective symptoms direct attention to the part in question; and the condition *is discernible only by the medical attendant on a careful comparison of the corresponding bones on each side*. The apparent hypertrophy is at the best but slight and inconspicuous; and several cases in succession may be examined before a well-marked instance is found. I need hardly say that in a stout patient it is difficult or impossible to satisfy oneself as to the presence of the condition. At a still later stage the phenomenon, moreover, becomes obscured by "brawny œdema" of the soft tissues on the one hand, and on the other by the supervention of a similar physical sign in the humerus on the opposite side.

Opportunities of examining microscopically or otherwise the state of the bones at the early period indicated are necessarily rare. I have, however, in my possession thin sections taken post mortem from a woman who lately died in the Cancer Hospital insane, and with very advanced tubercular disease of the left lung in addition to a right breast scirrhus of three years and a half's duration—death thus resulting from the complications long before the period when it would apparently have been caused by the malignant disease alone. In this patient no œdema of the arm anywhere existed, and no symptom (objective or subjective) was present to direct attention to the bones. Yet typical scirrhous cells, arranged in acini, were present in both humeri, and in one of the lumbar vertebræ in proportion to the proximity of these to the initial lesion, being most abundant in the head of the right humerus, less so in that of the left, and least in the vertebra. The degree of tenderness on pressure varies considerably, and this symptom is often entirely absent; or, fairly marked at one time, may be wanting at another. Being entirely subjective, not much stress can be laid upon it; it is probably due to irritative conditions of the periosteum, not sufficiently acute to be called periostitis.

As above remarked, this humerus symptom is at the best but inconspicuous; beyond some "aching" or "gnawing" pain down the upper arm, complaint of which is as a rule elicited only upon direct inquiry, and which, therefore, is probably not very severe, attention is not drawn to the part. In a marked degree, and in such form as to be readily demonstrable at the first examination to anyone unfamiliar with it, it occurs about once in five or six cases, being most readily recognisable in stout fleshy women a little before the supervention of œdema in the soft parts, and being usually absent in cases of "atrophic" scirrhus after the lapse even of several years. In most examples of mammary carcinoma, however, minor degrees of the affection are commonly present, when the patient has been thus diseased for more than a twelvemonth.

Thus of twenty-one cases recently examined the sign is recorded as specially marked in four only; in twelve instances the upper epiphysis of one humerus appeared, on careful comparison of the two sides, to be fuller and thicker than the normal; in seven, both, although the basis of inference was then necessarily unreliable; in two only—both atrophic—were the results of examination purely negative.

I am aware of the categorical contradiction, by no less an authority than Dr. Samuel Gross,[3] to my report of the above symptom. I have, however, been in the habit of demonstrating it in the out-patient room since 1880, and am well satisfied of its existence in a large proportion of the cases.

(To be concluded.)

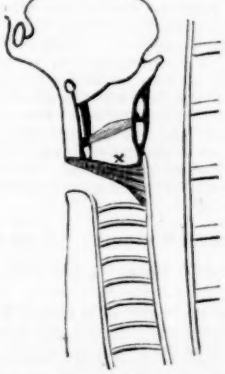
NOTE ON THE

TREATMENT OF TRACHEAL STENOSIS BY A NEW T-SHAPED TRACHEOTOMY TUBE.

By C. J. BOND, F.R.C.S.,
SURGEON TO THE LEICESTER INFIRMARY.

THE good results obtained by intubation in the cases of tracheal obstruction following tracheotomy recorded by Messrs. Pitts and Brook in THE LANCET of Jan. 10th show the value of that method of treatment in such cases. There is, however, another class of cases—viz., suicidal wounds of the trachea occurring in adults—in which the wound of the air-tube is always a transverse one; such cases are often only seen late in their history, and after cicatrisation and constriction have advanced to a considerable degree, and are correspondingly difficult to treat. In such a case I have found the T-shaped tube described below very useful, not indeed affording complete cure, for the tube has still to be worn, but rendering the patient's condition very comfortable, enabling him to talk and earn his living. The patient, a man aged fifty-two, "cut his throat" six months ago; the transverse wound completely divided the trachea below the cricoid; suppuration occurred, and dyspnœa came on three days afterwards; this was relieved by the introduction through the wound of an ordinary bivalve tracheotomy tube, and this he has never been able to leave out for any length of time since. On examination six months later, respiration was carried on entirely through the tracheal opening, the larynx being entirely shut off by a tough skin-like septum, which completely blocked the trachea at the upper level of the opening. The voice was of course absent. It was evident that free removal of the obstruction must be the first step, and this was done by first enlarging the opening downwards, and plugging the trachea with a Trendelenberg's cannula. The cricoid was then divided in the middle line, and the larynx laid open above the obstruction. (See engraving.) In this way the limits

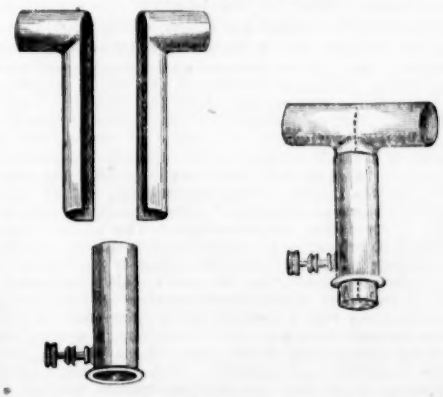
VERTICAL SECTION OF LARYNX.



×, Fibrous septum.

and attachments of the membrane were made out, and it was cut away with scissors. The part attached to the posterior wall of the trachea was very hard, almost cartilaginous, and had to be smoothed off with cutting forceps. The problem now remained how to keep the reopened channel patent and prevent reobstruction. For the first few days a piece of indiarubber tubing was worn entirely in the trachea, with a lateral opening opposite the tracheal opening, and secured by two threads. This, however, soon clogged with mucus; and as the outer opening contracted, its introduction became more and more difficult. After many trials and several disappointments I had the metal tube made in two halves, with a removable collar and screw. (See engraving.) This the patient now

T-SHAPED TRACHEOTOMY TUBE.



introduces easily himself one half at a time, and these, when held together by the collar and screw, form one rigid T-shaped tube, of which the long or tracheal portion passes through the cicatrising portion of trachea and keeps it patent; by blocking the outer opening with a plug of cork or the finger respiration is quite natural, and the voice clear and distinct. The patient has now worn the tube some months without any discomfort or sign of tracheal irritation. In this case the tendency to cicatricial encroachment was so great that I think it would have recurred whenever any tube was discontinued, even an intubation tube—in fact, he wore at one time a tracheotomy tube with the curve upwards, passing through the constricting ring; but in a short time, while wearing this, constriction began at the lower angle of the opening, by an encroachment all round of granulation tissue, leading to urgent dyspnœa until relieved by the downward tube. The T-tube combining the dilating advantages of an upward and downward tube was introduced in two halves, to get over the difficulty of introduction. If compelled, at any rate for some time, to wear some sort of tracheal dilator, the T-tube has the advantage over the intubation tube of allowing phonation. In these cases, then, of obstruction after transverse suicidal wound the T-tube will, I think, prove useful, and if not necessarily permanently, perhaps as a commencement before beginning intubation. It may be also that when healing is complete—that is, when skin and mucous membrane have joined all round and left no granulating and encroaching edge,—the T-tube might be discontinued, when the outer opening would soon comparatively close, though leaving a small aerial fistula. The tube was made for me by Wood of Leicester.

Leicester.

[3] International Journal of the Medical Sciences, March and April, 1888.

THE NORTH OF ENGLAND SURGICAL AID SOCIETY.

The annual report, in reviewing the work of this Society for the year 1890 (the second year of its existence), points with satisfaction to its augmented usefulness. In the nine months of 1889 forty-nine appliances were supplied; in the same proportion last year the number would have been sixty-six—the actual number was 121. The work has hitherto been carried on free of cost in rooms in the infirmary, but the committee have been compelled to begin the year by appointing (with the consent of the governors) one of the house surgeons of the infirmary to do the work previously performed by a subcommittee. The financial position renders necessary an appeal for funds to meet the increasing demands upon the Society.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SURFACE AND SUBSURFACE NODULAR RHEUMATISM.

BY ANGEL MONEY, M.D., F.R.C.P.

IN the recorded history of nodular rheumatism mention will be found of pericardial nodules and nodular pericarditis. I believe there is a radical distinction between the two, as there is between surface lesions and subsurface lesions generally. At a recent necropsy on a woman aged twenty fairly recent adhesions obliterated the whole pericardial sac, and nothing very nodular about the pericarditis could be detected; but, on peeling off all the pericardial lymph, at least three subpericardial nodules were found, each of the size of a small hempseed; the pericardial endothelium appeared to be intact over them, and they had made a place for themselves in the surface myocardium. These are, I suggest, the true homologues of subcutaneous nodules, and ought to be called subpericardial. The nodular endocarditis is to be compared to nodular pericarditis, pleurisy, and perihepatitis. Further information is required about this surface inflammation. In the nodular perihepatitis which I have seen several times one observes fine granulations not much larger than grains of white sand, and the spaces between them are wide; but there is a regularity about the arrangement of the granulations which does not obtain in nodular perisplenitis. The appearance hardly reminds one of the true granular pneumonias, and yet the sizing and regularity are points in common. As a suggestion it may be put forth that all rheumatic manifestations are locally circumscribed, but that at the surface of organs this feature is masked by attendant phenomena, such as the effusion of lymph and the coalescence of locally circumscribed areas. Beneath the surface there is less chance for the masking, possibly owing to the less anastomosis between vessels and other anatomical and physiological arrangements.

Subcutaneous nodules and acute rheumatic polyarthritis are seldom found together. Generally the rheumatism is of subacute and subchronic intensity and duration when nodules appear. The more smouldering the lesion the more liability is there to subcutaneous and subcapsular and subserous nodules to form. Is this true? It is rather rare in my experience to find crops of nodules coming and going with rapidity—i.e., in the course of a few days. A nodule now and then behaves thus, but not often. Their relation to chronicity is further testified by the usual absence of tenderness, of pain, and of fever. Diseases that are chronic in adults are less chronic in their histological development in children, any irritation giving rise to more interstitial sprouting in children, as would indeed be expected from their nearness to or less distance from the embryonic multiplication which is, or which characterises, the growing. Dr. Cheadle observes: "This very acute inflammation (pericarditis) appears to be less identified with the development of nodules than the more chronic form." In most acute diseases there is a tendency to surface inflammations, and, in proportion as chronicity obtains, lesions appear in the deeper interstitial parts. The subserous, cutaneous, and capsular nodules then are a measure not only of the gravity of the prognosis, but also of the duration and insidiousness of the disease.

A contrast is suggested between surface and subsurface nodular rheumatism. That the rheumatic foci are more numerous, smaller, more closely aggregated, more transient, more painful, the more superficial they are; and, conversely, the deeper seated, the less numerous, the less closely packed, more permanent and less painful.

Harley-street, W.

HYPERPYREXIA FOLLOWING CURETTING.

BY J. E. H. KELSO, M.B., C.M.

THE following case is interesting as showing the care necessary after curetting, and also one of the difficulties practitioners often have with patients in the country.

Mrs. F—— came under my care in August, 1889. Her case was as follows. She commenced menstruating at fifteen years of age. At eighteen she had hard out-door work on a farm, and at this time she noticed that her menstruation was excessive in amount. She married at twenty; had no children; no history of abortion, and her family history was good. The menorrhagia increased as years went on, and at twenty-seven—viz., three years previous to her application to me—she was attacked with severe pain in the back, and at this time had an almost continuous discharge. She had derived little benefit from treatment previously adopted. When she consulted me she was pale and somewhat emaciated. On examination I found her uterus to be enlarged, retroflexed, and immovable; there was no pain on passing the sound. I ordered rest, hot water injections, and ergot internally. No improvement resulting from this treatment, on Oct. 9th I determined to curette, the discharge being little. With strictly antiseptic precautions I performed the operation, dilating the cervix with Hegar's dilators. The scrapings were set aside for microscopic examination, but were acidentally thrown away by one of the patient's friends. After curetting, pure carbolic acid was applied to the endometrium, and I left the patient with strict orders to keep her bed for a week. I subsequently learned that, feeling perfectly well, the patient got up an hour after the operation, went to her garden to take in some clothes which were drying as it had commenced to rain, and got wet during the process. In the morning of Oct. 11th her temperature was 103°; pulse 110, hard, bounding; no tenderness on abdominal pressure. I prescribed hot vaginal injections of carbolic acid. The next day the temperature was 105·1°; pulse 120. I ordered drop doses of aconite every quarter of an hour, as there were pain and symptoms of pelvic peritonitis. In the evening she became delirious; temperature 107°; pulse 160. Owing to the extreme gravity of her symptoms I ordered her to be placed in a warm bath, cold water added, and afterwards wet packing. Four hours after this was done the temperature was 101·2°, and she was now conscious; she now had a morphia suppository (¼ gr.) and a tablespoonful of brandy every three hours; also, small doses of quinine; milk diet. From the 12th to the 21st there were a morning fall and evening rise of temperature, but it did not exceed 102°. Her bowels were regulated by enemata and an occasional gentle aperient. Abdominal pain was slight. On Oct. 21st the temperature reached 105·1°; and quinine failing to reduce it, I gave twenty grains of antipyrin every three hours. On the following day the temperature fell to 100°; antipyrin was stopped, and quinine substituted. There was little variation of temperature until Nov. 1st, when it rose to 103° with vomiting and retention of urine. I ordered ice to be sucked, relieved the retention of urine with the catheter, and gave fifteen grains of quinine per rectum every four hours. In the evening of Nov. 2nd no nourishment could be taken by the mouth, the patient being supported by beef-tea and brandy enemata, also rectal suppositories. Temperature now fell to 99·8°. On Nov. 5th she passed urine without the aid of the catheter, and took some milk by the mouth, which she retained. On the 10th the temperature was 99°. She now had a simple febrifuge. There was no pain or abdominal tenderness. The next day the temperature was normal. Menstruation occurred on Dec. 1st, lasted three days, and was of small amount. The patient was now allowed to get up daily, the temperature remaining normal. She recovered strength, although she was under treatment for anæmia for four months. I saw her at the end of June, 1890. She had menstruated regularly, had gained flesh, was not anæmic, and said she had not enjoyed such good health for ten years.

Kincardine-on-Forth.

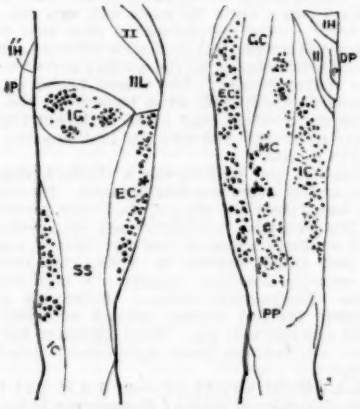
HERPES ZOSTER OF THE LEG.

BY CLARENCE BEESLEY, L.R.C.P., L.R.C.S.

THE following brief notes of a case of herpes may be of interest as showing the apparent nervous origin of the complaint, and its distribution over the cutaneous area supplied by a given nerve—in this case the anterior crural. The patient, a male aged sixty, had suffered very severe pain in the right thigh ten days before the eruption showed itself. When seen, a very copious characteristic herpetic rash covered the anterior aspect of the thigh as far as the upper border of the patella, and there was also a small patch just

above the gluteal fold. The sartorius appeared to divide the eruption into two distinct parts, and there were no vesicles in the skin over this muscle. The following diagram

CUTANEOUS NERVES OF LOWER EXTREMITY.



Posterior view. Anterior view.

(*After Flower.*)

shows the extent of the rash at a glance, and it is seen to be exactly limited to the external (E C), middle (M C), and internal (I C) cutaneous branches of the anterior crural. Under appropriate remedies the patient made a somewhat tardy but complete recovery.

Warrington.

THE EFFECTS OF OVERDOSES OF EXALGINE (METHYL-ACETANILIDE).

BY ARTHUR CONNING HARTLEY, M.B., C.M.

WHILE having many satisfactory results from the use of exalgine, I think it would be of some interest to give an account of two cases of overdose.

CASE 1.—Mrs. C——, aged twenty-seven, married, had been subject to severe periodic attacks of neuralgia over the right orbito-temporal region for the last five years, and, as nothing had done her any good, exalgine was tried. The attack began at 11 A.M., and increased in severity. At 1 P.M. she took a three-grain dose of the French preparation (MM. Brigonnet and Naville), and the same dose was repeated at 2, 3, 4, and 6 P.M., without giving any relief or discomfort. At 9 P.M. she took three grains more, and almost immediately afterwards felt absolutely powerless. This lasted for five minutes, the patient remaining quite conscious. She compared the sensation to that of taking chloroform before she was quite "under." At 12.45 A.M. the pain still being very severe, she took a seventh dose, and in fifteen minutes felt a feeling of impending death, could not speak, gasped for breath, pallor intense, dilated pupils; the limbs became quite rigid, heart palpitated, felt utterly powerless, and broke out into a profuse perspiration. By the aid of fresh air, stimulants, &c., the attack passed off in fifteen minutes, leaving her very prostrate, with ringing sounds in the ears. The pain, which frequently lasted only this length of time, now left her. Other functions remained normal, and no rash developed. This happened between her menstrual periods.

CASE 2.—Mrs. G—— had been taking two-grain doses at intervals for a neuralgic headache, obtaining relief, though sometimes feeling slightly faint, but by mistake an undetermined overdose was taken. She soon experienced a feeling of complete prostration, her limbs became powerless though not rigid, felt as if she was sinking through the bed, slight perspiration, and thought she was dying; breathing faint and shallow, and nearly pulseless at the wrist. Mustard, hot bottles, and stimulants, brought her round, but she felt very weak for many days afterwards.

Liscard.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

TWO CASES OF PERFORATING ULCER OF THE STOMACH, WITH MISLEADING PHYSICAL SIGNS.

(Under the care of Drs. DICKINSON and EWART.)

IN these cases the peritonitis which followed the perforation of the ulcers did not pursue the more usual course and spread throughout the peritoneal cavity, but remained more or less localised, though most intense and purulent. The purulent collections secondary to perforations of the stomach may attain large size and produce swellings in parts of the abdomen where such would not be suspected. They present great difficulty in diagnosis on account of the gaseous contents which are not infrequently present and mask the evidence of fluid. Sometimes, in consequence of adhesions between the base of the ulcer and the diaphragm, perforation may take place into the pleura, and empyema, with pneumothorax, result. The symptoms in Case 2 made it probable that such a complication had arisen. The occasional coexistence of certain heart murmurs, indicative of pericarditis and endocarditis, with symptoms pointing to gastric ulcer in chlorotic girls, has been observed by Dr. Ord in a few instances, and formed the subject of an interesting paper read by him before the Medical Society.[1] For the account of these cases we are indebted to Dr. Charles Salter and Mr. W. L. Dickinson, formerly medical registrars to the hospital.

CASE 1. *Perforation with supposed pericarditis.*—In December, 1887, a chlorotic girl aged twenty-four was admitted under Dr. Dickinson with symptoms of peritonitis, which from the history was considered to be due to perforation of the stomach. Besides the peritonitis there was considerable disturbance of respiration and circulation. The heart's action was forcible, and friction sounds, having all the characters of those present in pericarditis, were plainly audible along the right border of the sternum from the third to the fifth costal cartilage. Moreover, there was tenderness over the whole precordium. Pleural friction was heard in the left axilla. These signs, taken in connexion with the fact that there was a great liability to syncopal attacks, seemed to indicate that in addition to peritonitis and pleurisy there was pericarditis. When the patient had been in the hospital about ten days she was attacked with diphtheria and rapidly died. At the necropsy there was found a perforation of the posterior wall of the stomach, which had caused peritonitis, almost restricted to the left half of the diaphragm and the upper surface of the left lobe of the liver, the under surface of the liver being also coated by recent lymph. A layer of soft lymph coated the lower part of the left pleura. There was no trace of pericarditis. Between the liver and the diaphragm was an abscess pushing up the left leaflet some distance; and it is probable that this alteration of the usual relations, together with the pleurisy on the left upper surface of the diaphragm, gave rise to the friction synchronous with the heart's action which was mistaken for pericarditis.

CASE 2. *Perforation with supposed pneumothorax.*—In November, 1890, a very chlorotic girl, aged eighteen, was admitted under Dr. Ewart with signs of pneumonia at the base of the left lung and a history of gastric ulcer. Three days later there was consolidation at the bases of both lungs. This condition of double pneumonia underwent very slow resolution, but a gradual subsidence of fever suggestive of an irregular pneumonic lysis took place in the course of three weeks. There was now a return of fever and serious symptoms. A careful examination of the chest showed that the right lung had returned to its normal state, but that on the

[1] Trans. Med. Soc., 1888, March.

left side just above the spleen pure amphoric breathing was audible, and a perfect "bell-note" could be obtained by percussion with a couple of coins. At the posterior base there was evidence of some effusion of fluid. These physical signs varied a little from day to day, but those especially characteristic of pneumothorax were always present. Many rigors occurred, and the patient died six weeks after admission, ordinary gastric symptoms having been in abeyance throughout. At the necropsy there was no pneumothorax. The lower lobe of the left lung was partially compressed by a small effusion of turbid fluid into the left pleura. An abscess cavity was found containing air and pus between the diaphragm, the spleen, and the upper surface of the left lobe of the liver. Opening into this abscess was a small perforating ulcer on the anterior wall of the stomach near the cardiac end. There was also a ragged abscess in the substance of the spleen, which communicated with that beneath the diaphragm.

TOTTENHAM HOSPITAL.

FOREIGN BODY IN THE FEMALE BLADDER; REMOVAL.

(Under the care of Dr. HOOPER MAY.)

THE surgeon is much more frequently called upon to remove foreign bodies from the bladder of the female than from the bladder of the male, and such bodies are very commonly found forming the nucleus of a stone when removed from the former. Although they are usually introduced from the urethra by the patient, there is a specimen in the museum of Guy's Hospital, a piece of slate pencil, which was removed from the bladder, having found its way there from a neighbouring viscus. Sometimes the shape of the body prevents its ready extraction, but removal can usually be effected, as in this case, after dilatation of the urethra.

E. A——, aged twenty, was admitted to the hospital in June, 1889. She was a delicate-looking girl. The right hip-joint was stiff, with scars in the thigh from old abscesses. She says "she sat on her pocket, and a pencil slipped into her bladder a week ago." She complains of constant pain at the "bottom of the stomach" and pain during micturition, which has not been more frequent than usual. There has been no incontinence, and the urine is neutral, with phosphates and mucus.

June 27th.—Patient being under chloroform a sound was introduced, but gave no certain sign. The urethra was dilated with forceps and the finger, and on introducing the finger it immediately came in contact with a pencil lying across the bladder. Difficulty was found in turning it so as to get hold of the end. After partly filling the bladder with boracic lotion it was turned so that the end could be seized with small lithotomy forceps, and then it was removed through the urethra without difficulty. The urethra was slightly torn upwards for about half an inch.

The night after the operation she had incontinence of urine; none in the day, and none in the night following. Since that there has been incontinence occasionally. The bladder was washed out daily with boracic lotion until July 7th. Before the operation the temperature had been irregular, ranging as high as 102°. The day after it was 100·4°; then it became normal.

July 10th.—The urine continues neutral in reaction. The foreign body, which the patient called a pencil-case, was a thin tin cylinder, about 3½ in. long, partly encrusted with phosphates.

13th.—For the last two or three days the urine has been acid, and there has been no incontinence.

14th.—Discharged well.

LINCOLN COUNTY HOSPITAL.

CASE OF TRAUMATIC EPILEPSY; TREPHINING; RECOVERY; REMARKS.

(Under the care of Mr. CANT.)

FOR the account of this case we are indebted to Dr. Brook, late house surgeon.

C. C——, a carter aged thirty-four, came to the surgery on the afternoon of Sept. 25th suffering from the effects of a kick from a horse on the right temple and cheek. He walked to the hospital and was perfectly sensible, but said that he remembered nothing for some minutes after the receipt of the injury. There was an abrasion of the skin over the right malar bone, with ecchymosis of the conjunctiva on the outer side, and there was a bruise on the temporal ridge, where the caulking of the shoe had struck him. No fracture could be made out, and the eye had escaped injury. He complained of pain over the right malar bone and temple, but absolutely refused to be treated as an in-patient, coming to the surgery every morning to have the wound dressed. The wound healed up, and he was apparently almost well when he came on Oct. 1st, six days after the accident, and asked to be admitted as an in-patient, as he had had two fits that morning for the first time in his life.

On admission the patient was a thickset, short, very muscular, and in every way healthy man. He complained of pain over the right temple, but was perfectly conscious. No paralysis; superficial and deep reflexes and electrical reactions appeared healthy. Pupils, moderately dilated and equal, reacted to light. Ophthalmoscope showed nothing abnormal, except old high myopia of right eye. Temperature normal. Urine: sp. gr. 1015; no albumen. He had always enjoyed excellent health; never had any epileptic fits. Total abstainer for the last six years. On Oct. 1st three epileptiform attacks after admission.

Oct. 2nd.—Eight attacks between 5 A.M. and 11 A.M.; they were all similar in nature; immediately before one of these the patient was lying on his right side and perfectly conscious. The attack began with twitching of the left side of the mouth, which was drawn upwards and to the left, followed after a few seconds by twitching of the left hand and protrusion of the tongue to the right. During this time the right side and both legs were unaffected; but he now turned over on his back, clenching his hands and drawing them up, while the legs were extended stiffly, the eyes closed and teeth clenched, and back arched so that he was resting on his heels and back of his head. This condition of opisthotonos lasted for a few seconds and then suddenly relaxed; at the same time he gave a loud cry and struck the bed violently several times, not rapidly, but at intervals of about five seconds, drawing up his arms and arching his back, and then, after a pause, violently extending the arms, while the back relaxed. This attack lasted four minutes. Immediately before he recovered he sighed deeply, turned on his right side, and put his right hand to the right temple. He regained consciousness perfectly in the course of a minute. Pupils widely dilated. He did not pass urine during the attack. He said that before an attack comes on he has pain at the seat of injury, which passes right round his head, and then he loses consciousness.

During the next fortnight he had from seven to twelve such attacks daily, although he had been taking twenty grains of bromide of potassium, five grains of iodide of potassium, one drachm of liquor hydrargyri perchloridi; to be taken three times a day. During this time he rapidly lost flesh, becoming very weak, so that the attacks appeared to be less violent; they, however, were of longer duration, and had altered in character, the patient often biting his tongue.

Oct. 29th.—Unconscious for two hours; no movement, except quivering of the eyelids, but when touched he sprang into a sitting position and tried to bite, snarling like a dog. On coming round, he remembered nothing of what had happened. He was out of bed when one of these attacks began, walking across the ward, and was seen to drag the left leg for some seconds before he lost consciousness and had time to get back to bed. On percussing over the right temple there was a very tender area the size of a shilling two inches behind and above the external angular process of the frontal bone. This was exactly the place over which he put his hand before regaining consciousness, and he said that he had always pain there after a fit was over. As the symptoms indicated a localised cortical lesion, and as they were not relieved by medicinal treatment, it was decided to trephine over the seat of the lesion in the hope of relieving the patient. Every attack began with twitching of the left zygomatici, so that there was evidently a discharging cortical lesion situated in the facial centre on the right side—i.e., in the ascending frontal and ascending parietal convolutions and point opposite to the sulcus between the second at a

third frontal convolutions. The patient's head was shaved and the motor area mapped out according to Reid's rules, and at the point indicated a circle one inch in diameter, having its centre two inches and a quarter behind and two inches and a half above the external angular process, was marked out with nitrate of silver. The following day, Nov. 10th, the patient was anæsthetised by the A.C.E. mixture, and the operation performed by Mr. Cant. The strictest antiseptic precautions were adopted. The scalp was shaved and thoroughly washed, a wet pad of sal alembroth wool and perchloride of mercury lotion being applied for six hours before the operation, which was performed in one of the small wards. All the instruments were kept in carbolic lotion, and the operator's hands dipped in perchloride of mercury lotion (1 in 2000), sponges of sal alembroth wool being used. The scalp was reflected downwards from the right temple by a semilunar flap. There were no signs of any fracture of the skull. The pin of an inch trephine was applied at a point corresponding to the centre of the circle marked out (¾ in.) behind the coronol suture just over the temporal ridge. The circle of bone was removed without difficulty, and appeared quite natural. The dura mater bulged very much at the posterior part of the opening. The dura mater was divided and reflected, a considerable quantity of serous fluid escaping from the bulging portion, which was found to be situated over the ascending parietal convolution, the fissure of Rolando crossing the posterior half of the opening. The fluid (which was of a yellowish colour) was beneath the arachnoid, lying entirely behind the fissure of Rolando, and at this spot a black substance could be seen through the pia mater, which on exposure proved to be two small blood-clots in the grey matter, and which were removed. An aspirator needle was pushed into the cortex for three-quarters of an inch in case there should be any collection of pus, but nothing was found. The trephine opening was extended backwards for another three-quarters of inch, but nothing further was discovered. The wound was washed with perchloride solution (1 in 2000), and the dura mater brought together with fine chromic gut sutures, the scalp replaced, and sutured with carbolised silk. A pad of wet sal alembroth wool covered with tissue was applied. The bone was not replaced owing to the brain bulging. During the operation, whenever the cortex was touched, the left side of the mouth and left hand twitched. The patient soon came round from the anæsthetic, and was perfectly conscious.

Nov. 11th.—Very excitable and restless. The wound was dressed under the spray and a suture removed. Ordered bromide and chloral if restless.

12th.—No epileptic attack since the operation. Temperature 98·8°.

13th.—Had a slight twitching of the left side of the mouth lasting half a minute.

15th.—Scalp wound united; sutures removed. There has not been any recurrence of the convulsions since the 13th, and the patient is in very good spirits.

Dec. 22nd.—Discharged from the hospital in perfect health and spirits, having had no return of the fits in any way whatever.

Remarks by Mr. CANT.—The above case seems to clearly prove the advisability of operating in cases of traumatic epilepsy, especially when the convulsions and the pain both so clearly indicate the seat of the lesion. This patient commenced having fits about one week after the receipt of the injury, and continued having them very frequently and very severely for six weeks, with commencing loss of power of left leg. After the operation was performed they entirely ceased, and up to the present time, several weeks after, he has had no return of them, but has gained in flesh, and is now apparently in perfect health.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—This infirmary was satisfactorily and successfully conducted during the past year. There were 7889 in- and out-patients. Of the out-patients, 915 were treated in the eye and ear department. The continuous increase of in-patients forewarns the Board that additional wards will soon be required. The total income was £6728 19*s.* 3*d.*, and the expenditure (including £441 16*s.* 6*d.*, the previous year's deficit), amounted to £6916 5*s.* 1*d.* But that liability had been reduced to £187 5*s.* 10*d.* During the year fair progress was made with the building fund for the "Nurses' Home."

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Exophthalmic Goitre.—Duct Carcinoma of Breast.—Cystic Disease of Breast.—Thrombosis of Cerebral Veins.—Loose Bodies from the Knee-joint.—Dislocated Internal Semilunar Fibro-cartilage fixed to the Patella.

AN ordinary meeting of the Pathological Society was held on March 3rd, the President, Dr. W. H. Dickinson, in the chair.

Mr. W. G. SPENCER showed a specimen taken from a fatal case of Exophthalmic Goitre, consisting of a large bronchocele, and attached to which at the lower border was a persistent thymus gland. The bronchocele had been produced by uniform enlargement of both lateral lobes and of the isthmus, and surrounded the trachea so as to meet behind that tube, compressing it laterally from the larynx above to one inch from the bifurcation below. The carotids, vagi, and internal jugulars had been pushed outwards, and lay separated from one another in deep grooves on the back of the tumour, whilst the recurrent nerves, after their reflection, were buried in the mass. The inferior thyroid arteries were much enlarged, that on the right side being a branch of the subclavian; on the left it arose from the aorta between the left carotid and subclavian. The tumour had the structure of a cystic colloid hypertrophy of the thyroid gland. There were no changes in the central nervous system. A persistent thymus larger than the head of the pancreas was attached to the goitre at the lower part, having the characteristic microscopic structure. The specimen was taken from a girl aged twenty, who had been under the care of Drs. Ferris and Davidson of Uxbridge for a year suffering from exophthalmic goitre. The goitre slowly increased in spite of treatment, until the patient had attacks of dyspnœa. After admission to the Westminster Hospital asphyxia became imminent, and Mr. Spencer opened the trachea through the upper part of the tumour. There was much hæmorrhage, and the gland substance bulged greatly when the capsule was divided, showing the tension which existed within the capsule. The operation could not have been performed except with the aid of several assistants. No relief was afforded when the trachea was opened, nor when an ordinary tracheotomy tube was inserted. However, air entered freely through a vulcanite tube passed for four inches down the trachea. The dyspnœa was quite relieved for a time, but during the same evening mucus collected below the tube which the patient could not cough up, and she died in asphyxia. Mr. Spencer further remarked that this termination of a case of exophthalmic goitre was rare, and that some recent operations by which a cure had resulted after the removal of a great portion of the gland connected the pathology of the disease closely with the thyroid body.—The PRESIDENT asked what part of the trachea was constricted, and whether the tube was passed in above the constriction or below it.—Mr. SPENCER replied that the compression was exerted from the larynx to within an inch of the bifurcation of the trachea, and that the rubber tube was passed down the trachea to below the area of compression.

Mr. H. B. ROBINSON showed a specimen of Duct Carcinoma of the Breast, taken from a woman aged fifty-one. Five years before she had had a knock on the breast, and there was no family history of cancer. The tumour involved the left breast, and was external to the nipple, which was not retracted, and there was no discharge from it. The growth had for some time increased steadily in size, and there was no enlargement of the axillary glands. On removal, it was found to be partly hard and partly cystic, the cysts containing greenish-brown fluid, and the cut surface of the hard part cupping distinctly. Under the microscope the larger cysts were found to be lined with two rows of cells, which were flattened from pressure, while in some there was marked proliferation of the epithelium, which was swollen and of spheroidal type. The solid part showed typical columnar-celled carcinoma. There was very little round-celled infiltration of the connective tissue. Clinically it appeared to be a typical scirrhus, only there was no retraction of the nipple and no involvement of the glands. This low degree of malignancy suggested that early removal would lead to permanent cure. The growth might either begin in the large

ducts, and thus resemble papilloma, or it might begin in the acinous dilatations.—Mr. R. WILLIAMS said that a great many of these growths were not cancers at all, but were either villous growths or sarcomas. They were classed by Billroth as soft tubular adenomas.—Mr. BOWLBY said that these tumours did not generally run the ordinary course of cancers of the breast; they grew more slowly, did not affect the glands, were less likely to recur, and did not disseminate. They were not simple papillomas, because they infiltrated both the skin above and the adjacent tissues below; they often broke down to form ulcers. The specimen shown differed from the ordinary duct cancer of the breast, with its branching processes, in presenting these distinct tubular structures. He doubted if this case would fall clinically under the same category as the majority of duct cancers.—Mr. ROBINSON, in reply, said that the operation was done in November, 1889; the whole breast was removed, and the patient was at present free from recurrence.

Mr. ROBINSON then described two cases of Cystic Disease of the Breast. The first was a single girl aged twenty, who was admitted in July, 1890. A lump in the left breast had existed for two years, and had slowly increased in size. There had been no discharge from the nipple, and no enlargement of the glands. There was no limiting capsule to the growth. Its centre was found to be composed of an aggregation of small tense cysts; at the margin the cysts were further apart, and radiated towards the periphery of the gland. The cysts were surrounded by condensed fibrous tissue. The second case occurred in a girl aged nineteen, who was admitted in the same month. Eleven months before a growth had been noticed in the upper part of the left breast of about the size of a filbert, and it caused some shooting pain, which strapping failed to relieve. It was freely movable, there was no retraction of the nipple, no enlarged glands, and it was devoid of limiting capsule. Its appearance on section and under the microscope was similar to the first case related. The cause of both was obscure.—Mr. R. WILLIAMS regarded them as instances of chronic interstitial mastitis, and to a question as to the presence of intracystic growths he received an affirmative reply.

Dr. W. COLLIER exhibited a Brain which was the seat of Thrombosis of the Veins. The patient was a woman aged twenty-three, who was prematurely confined of a stillborn child on Jan. 4th, 1891, and on the 20th she complained of headache, and became hysterical and aphasic. In a few hours general convulsions affected the right side, vomiting supervened, and the urine contained a trace of albumen. In a week the patient became comatose and died, the temperature rising before death to 107° F. At the necropsy the upper surface of the left hemisphere was found ecchymosed and covered with a thin layer of lymph. There was extensive thrombosis of the veins on the left side, while the arteries at the base were normal and empty. The cerebral substance was softened, and there was no evidence of ear disease or septic trouble.—Dr. DICKINSON remembered seeing a young woman who after confinement had plugging of the veins of the leg, and later hemiplegia supervened.—Dr. HADDEN referred to the case of a young woman aged twenty-three, in whom hemiplegia developed after an attack of convulsions. She died, and cerebral thrombosis was found. There had been a suspicion of miscarriage some time before.

Mr. HOWARD MARSH showed several Loose Bodies removed from the Knee-joint during the operation of excision. The patient from whom the specimens were removed was a female aged seventeen, whose left knee-joint had been the seat of tuberculous disease for three or four years. The synovial membrane was considerably thickened, and the head of the tibia was displaced backwards and outwards towards the popliteal space. When the joint was opened, five loose bodies escaped. They were about the size of almonds, glistening and perfectly smooth on the surface, of a pale-yellow colour, and apparently consisted of masses of fat. The joint was extensively diseased. The synovial membrane was thickened and overlapped the articular cartilage. There was no suppuration, and the joint contained no fluid. Two other similar loose bodies were found attached to the synovial membrane investing the lower end of the femur. On examination, these loose bodies were found to consist of a shell, or capsule, enclosing a central mass, with an intervening space. The capsule was firm and of the consistence of coagulated fibrine. The central portion resembled, in general appearance, those shaggy masses of fibrine, which are often found in the cavities of bursæ. Mr. Edgar Willett, curator of the museum, had furnished the following report: "Under the microscope the difference between the outer layer and the central portion was very distinct. The outer layer was about $\frac{1}{70}$th of an inch thick, and was composed of a uniform collection of granular cells without stroma or definite structure. The transition to the inner part, or kernel, was very marked. This kernel had an imperfect and irregular structure, presenting a number of well-defined collections of small cells, either circular or oval in shape, and resembling the giant cells found in tubercular deposits. No tubercle bacilli were found." Mr. Marsh remarked that he had not met with this kind of loose body before; but, after Mr. Willett's report, he was inclined to regard them as tubercular formations in the fringes of the synovial membrane, to which some were still connected, while some had become detached. The view which some might be inclined to hold, that these masses were similar to the melon-seed-like bodies often found in the sheaths of tendons, appeared to be negatived by the fact that the two differed from each other in structure, the melon-seed-like bodies being quite amorphous—evidently nothing more than masses of coagulated fibrine,—while the bodies which he had shown presented the microscopic structure of tubercle in, as he thought, an unmistakable form. Mr. Alexis Thomson of Edinburgh had described, in a chapter on nodular tubercle of the synovial membrane, the occurrence of polypoid masses apparently precisely similar to those described in the paper, and Mr. Watson Cheyne had also alluded to loose bodies of the same kind.

Mr. EDGAR WILLETT showed for Mr. Harrison Cripps two Loose Bodies which had been removed separately, with an interval of four weeks, from the left knee-joint of a healthy young man. There was a history of an injury. The bodies were flat, roughly about one inch square, and had a layer of smooth cartilage on one surface, and were calcareous if not bony on the other. On comparing them, it was found that they fitted together. The question was raised as to whether they had originally been attached to the femur and had become separated by the injury.

Mr. BRUCE CLARKE showed a piece of a Patellar Cartilage which had been knocked off and formed a loose body in the knee-joint. The patient was a man aged twenty-eight, who slipped on getting into a 'bus in the Hammersmith-road, and was taken to the West London Hospital. He was operated on for a dislocated internal semilunar cartilage, and in the course of the operation an abrasion was found on the under surface of the patella, from which a piece of cartilage had been knocked out. The cartilage (about half an inch by three-quarters of an inch) was extracted from the joint, and was shown to the meeting. A good recovery with perfect movement of knee-joint ensued, and the patient had since been under his care for a loose body in the opposite joint. A loose body had been removed from this joint seven years ago by Mr. Baker of Birmingham. It was worthy of note that this joint, which had been twice operated on, was now the seat of rheumatoid thickening of the edges of the condylar cartilages on the femur.

Dr. ROLLESTON showed the Patella from a Left Knee-joint which had been partially dislocated outwards for years. The articular surface of the patella had regularly adherent to its periphery a cartilage resembling the semilunar cartilages of the knee-joint. The internal semilunar cartilage was absent from its position on the tibia. What appeared to be the femoral surface of the internal semilunar cartilage looked into the joint, the tibial surface being adherent to the margin of the patella by what greatly resembled a coronary ligament of the normal knee-joint. There was a synovial pouch between the cartilage-clad surface of the patella and the tibial surface of the displaced cartilage, just as in the knee between the tibia and semilunar cartilages. At the upper border of the patella, however, the whole cartilage was for a small area adherent to the patella. The two extremities of what appeared to be the internal semilunar cartilage were not separated, but united by a firm plate of cartilage the size of a shilling. This additional piece lay to the inner side of the patella, so that the supposed internal semilunar cartilage had rotated round before becoming adherent to the patella, the external condyle of the femur only articulating with the tibia. There was chronic rheumatoid arthritis of the joint. The external condyle was eburnated, and the external semilunar cartilage was partially eroded. The internal condyle was clad with cartilage. Cartilages

lipped aroond both condyles, especially the external.—Mr. SHEILD referred to a loose cartilage which he had exhibited some time ago, and which he believed had been separated by violence. His ideas as to its causation were subjected to much criticism at the time, but two of the cases now shown confirmed the view he then put forward. Another of the specimens looked much like quiet necrosis of the cartilage, and a microscopical examination should be made to see if it were so. The idea that loose bodies in joints might be tubercular was new to him, although he knew that bacilli had been found in the melon-seed bodies of compound palmar ganglion. These bodies were common in chronic rheumatoid arthritis, and this affection was often found in joints which clinically had exhibited no symptoms of that affection.—Mr. J. HUTCHINSON, jun., thought that the cartilage in Dr. Rolleston's case was semilunar, and he wondered if ever a semilunar cartilage had been found free in a joint. He referred to a specimen in which a complete septum existed between the femur and the tibia, which he believed to be due to an error in development, and he opined that the displacement might be developmental in the case shown. He related a case in which melon-seed bodies were removed from the front of the ankle-joint of a boy who a few months later returned with tubercular disease of the joint itself.—Mr. CLUTTON said that it was a pity that in the discussion many distinct varieties of disease were being confounded. On two occasions he had removed loose bodies from chronic tubercular joints, and less than a week ago he had found one of these bodies attached to the pulpy synovial membrane. They were never found in olden days, because the joints were not opened until the loose bodies had caseated, softened down, and dissolved, coming away disintegrated in the discharges from the sinuses. He had removed a loose body which was rough on one side and smooth on the other from a case in which there was no history of injury.—Mr. SHEILD said there was a specimen in the museum of St. George's Hospital where the semilunar castilage was practically free, being held only by a thread. He thought that Dr. Rolleston's specimen was too small to be a semilunar cartilage.—Mr. BRODIE called attention to the fact that the cartilage was only attached to the patella on the outer side.—Mr. ROBINSON said that three cases of nodular tubercular disease had been in St. Thomas's Hospital recently. In all the bodies were attached by long peduncles and were proved to be tubercular.—Mr. WINGRAVE said it was curious that the cartilage should be of the precise size of the patella.—Mr. MARSH, in reply, thought that loose bodies might be tubercular in a larger number of cases than had hitherto been suspected.—Dr. ROLLESTON, in reply, said that as there had been a history of severe injury to the joint, he was loth to believe that the affection was of congenital origin. The smallness of the cartilage was no doubt due to the fact that it probably did not develop after being displaced.—The PRESIDENT referred the specimen for further report to a special committee.

The following card specimens were shown:—

Mr. E. SOLLY: Melanotic Sarcoma of Conjunctiva.

Dr. W. B. HADDEN: Pancreas in Diabetes.

Messrs. S. G. SHATTOCK and C. A. BALLANCE: Fuchsin Bodies in Carcinoma, Tuberculosis of Glands, and Diphtheria of Tonsil.

Dr. ROLLESTON (for Mr. A. A. KANTHACK): Fuchsin Bodies in Rhinoscleroma and Madura Foot.

Recent specimens:—

Mr. WYATT WINGRAVE: Lungs and Larynx of a patient treated by Koch's method.

Dr. A. F. VOELCKER: Scurvy Rickets.

Dr. N. PITT: Gumma of Heart.

Living specimen:—

Mr. ROGER WILLIAMS: Man with Median Supernumerary Nipple.

CLINICAL SOCIETY OF LONDON.

Hydatids of Kidney.—Thiersch's Method of Skin-grafting.—Fracture of Ulna.—Lipoma of Nose.—Multiple Lipomata.—Serpiginous Rodent Ulcer of Face.—Stricture of Œsophagus, with Laryngeal Paralysis.—Adjourned discussion on Removal of the Vermiform Appendix.

A CLINICAL EVENING of this Society took place on Feb. 27th, the President, Sir Dyce Duckworth, in the chair.

Mr. HURRY FENWICK showed the case of a man aged forty-six, who had a large Renal Tumour of thirty years' standing, and had passed hydatids by the urethra for the last five years. He also showed a second case of Renal Hydatid in a man aged fifty-seven. In this instance the cyst appeared to have been suppurating, as the urine at one time contained pus, together with bacteria, phosphates, uric acid, and small cysts. Gradually, however, the pain complained of had become less, the loin tumour began to contract, and the urine to clear. When the man was going to pass cysts he had definite indicative symptoms. There was first numbness of the testicle, which gradually increased to pain; the pain then travelled to the kidney, and the testicle became better; later, when the hydatid entered the urethra, there was tingling at the end of the penis. After from eight to ten hours the renal pain would cease, and the patient would pass about eight ounces of hydatid cysts. He had had a third case of renal hydatid under his care, in which drainage had been followed by a good result.

Mr. STANLEY BOYD showed a man aged sixty-five, from whose leg he had removed an Epitheliomatous Growth, leaving a large ulcerating surface. In order to cover this he adopted Thiersch's method of skin-grafting, sawing off with a razor large pieces of epidermis from the forearm, and covering the whole of the raw surface. An antiseptic dressing was placed over it, and the whole left for ten days, when it was found that it had healed by first intention. Success with the method depended upon stopping the hæmorrhage before applying the grafts.

Mr. PEARCE GOULD showed a case in which the Ulna was Fractured obliquely through the base of the Olecranon Process. The accident was one which had escaped the notice of most English writers, though it had been described by French and American authors. He himself had seen four cases. The patient he showed was aged twenty-eight, and he fell whilst skating. The fracture started from the base of the sigmoid notch, and passed obliquely downwards and backwards, the fragments being held in place by the aponeurosis. In the first case he had seen non-union had occurred, and the bone was wired. In the second and third cases bony union occurred. In the case he showed there was no bony union, and the triceps had wasted considerably. The injury was one liable to be overlooked, and if put up with the elbow bent at a right angle the lower end of the upper fragment was likely to come through the skin. It was better to put it up with the arm nearly straight.

Mr. BALMANNO SQUIRE showed a case of Lipoma Nasi after operation. The patient was a man aged sixty-five. The end of the nose had been carved off at four successive operations, and the parts had granulated up, giving a very good result.

Dr. STEPHEN MACKENZIE showed a man with Multiple Lipomata of twelve years' standing. They were first noticed after an attack of acute rheumatism, and were very painful at times. They were most plentiful on the extremities, being more abundant on the forearms and legs than on the arms and thighs.

Mr. SQUIRE showed a woman aged fifty-four with a Serpiginous Rodent Ulcer of the Face of seventeen years' duration, commencing on the lower lip. He referred to the points of diagnosis from syphilis and lupus.

Mr. CHARTERS SYMONDS showed two cases of Epitheliomatous Stricture of the Œsophagus, situated respectively twelve inches and eleven inches from the teeth. There was complete paralysis of the left side of the larynx, producing a high-pitched voice.

In reopening the discussion on the cases of Removal of the Vermiform Appendix, the PRESIDENT said that it was a question of moment for the physicians to decide when to transfer these cases to the surgeons, and for the latter to determine how best to conduct the operation. It was evident, from the large measure of success that attended the medical treatment of these cases, that operation was not needed in every instance, and there was a difficulty in deciding which should be transferred and when that step should be taken.—Mr. LANGTON said that the good results which had been brought forward bore evidence of the fact that removal of the appendix did not necessarily involve any serious risk to life, and this may have led to too hasty interference in some cases. A fuller experience, however, would indicate more accurately the proper time for transference for the purposes of operation. Though he had seen a large number of cases recover completely under the care of the physicians, there being in some no recurrence of the disease for many years, yet he was sure that surgery was

far in advance of medicine in the treatment of this affection. The anatomy of the parts was accurately known, and surgeons were at one as to the necessity of making the incision either just above Poupart's ligament or in the right linea semilunaris. Mr. Allingham's incision in the middle line had yielded, and it would be well to fit a support. It was no doubt more difficult to wash out from a lateral incision, but the tendency to hernia was less. There could be no universal way of dealing with the stump of the appendix. He (Mr. Langton) then referred to the time at which the operation should be performed. In the cases of acute perforative appendicitis, especially if associated with general peritonitis, operation was clearly called for at once. In recurrent cases with a periodic rise of temperature, indicating probably the formation of a small amount of pus, interference was also justifiable, but there remained a considerable number of cases in which it was difficult to decide. It was certainly bad practice to thrust in a needle to search for pus; it added considerably to the patient's danger. It was remarkable that the great majority of these cases occurred in young people and in males. The large amount of adenoid tissue in the appendix explained its liability to give way, and for the same reason the cæcum itself gave way before the rest of the large intestine in cases where the gut ruptured from obstruction *a fronte*. A great secret in the treatment was to provide free drainage. The operative measures constituted a marked advance over the old method of allowing the cases to drift on unrelieved, and if there had been such an epidemic of removal of appendices as had been referred to, they had been taken rather from the operating theatre, where lives had been saved, than from the post-mortem room, where lives had been sacrificed.—Mr. PEARCE GOULD said that the subject matter of the paper had been much discussed abroad, especially in Berlin and in America. He could not agree that surgeons were at one with regard to methods of treatment. The cases which had been described in the papers were fair examples of the three forms of the affection, and they also represented about the proportion in which they occurred. The relapsing or recurrent cases formed about 10 or 11 per cent. of the whole, and those with general peritonitis about a similar ratio. But by far the largest number of cases were instances of inflammation of the appendix associated with circumscribed suppuration. Mr. Sutton had seemed to imply that abscess had existed some time before the acute symptoms were set up, but he himself (Mr. Gould) regarded the abscess as the result of the local disease. The inflammation which occurred round the appendix very often not only shut off and localised the disease, but set up an inflammation in the appendix itself, which led to its obliteration, and the patient might then remain free from attacks afterwards. He had never known a relapse after a case of suppurating appendicitis. As to the treatment of these cases, the abscess should be opened, washed out, and drained, but the appendix need not be removed. It was better to wait in order to see where the abscess was forming, and then evacuate the pus by a small incision not more than an inch or an inch and a quarter long. This not only weakened the abdominal wall less, but one could never be sure of the extent of the adhesions, and it was certainly desirable to avoid opening the general peritoneal cavity. All the ponches of the abscess should be evacuated, taking care to avoid breaking down the limiting adhesions. He referred to a case in which under palpation the latter accident happened, and in spite of speedy operation the patient, a child, died of acute peritonitis. He advocated leaving the appendix, because its removal rendered the operation more dangerous, while leaving it did not increase the danger; also the incision must be larger, and the risk of breaking down adhesions was greater. There was more probability of the occurrence of ventral hernia, and it did not of necessity remove the whole of the disease, as gangrene recurred in the stump in one of the cases related. In the second class, represented by Mr. Allingham's case, an early laparotomy was clearly the only treatment. He preferred a median incision, with another over the semilunar line, which best provided for the speedy exit of pus from the appendix and allowed cleansing of the peritoneal cavity. With regard to relapsing typhlitis, the attacks occurred very frequently; he had known a case with as many as fourteen, and then the patient got well; they were therefore not necessarily fatal if not operated on. Nothing could be better than the result of Mr. Sutton's operation, which removed a distinct source of danger, though the latter might have been deferred for weeks or months. He was glad to hear that the opinion which Mr. Treves had recently expressed with regard to these cases was different from that which he propounded at the Royal Medical and Chirurgical Society three years ago; for it should not be forgotten that there was a distinct mortality to this operation. Error in diagnosis was frequent, and he himself had seen one case in which a perfectly healthy appendix was found on exploration. It probably might be safely asserted that the danger of local suppuration if a case were left would not be greater than the danger of the operation if the removal of the appendix were undertaken.—Dr. J. K. FOWLER referred to the pathology of the affection. Mr. Treves was apparently now of opinion that in the majority of the cases which recovered the symptoms were due to fæcal accumulation in the cæcum, followed by stercoral ulcer and inflammation of the overlying peritoneum. Stercoral ulcer was a rare condition, generally absent in fæcal accumulation, far in excess of that met with in typhlitis, and when present, as in chronic obstruction of the large bowel, often the cause of perforative peritonitis, whereas in fatal cases of typhlitis no such changes were found in the cæcum. All post-mortem evidence and that derived from operations was in favour of the appendix being the seat of the affection. That the "complete clearing up of the local signs" could not be trusted to prove that the mild cases were of cæcal origin was shown by Mr. Treves' case,[1] which proved to be one of appendicitis, although before the operation there was "no trace of the iliac swelling," and "the abdominal signs had entirely disappeared." He agreed with the statement that "it could not be denied" that inflammation of the cæcum might in some cases be the cause of the symptoms, but he knew of no evidence pointing to that conclusion. He had analysed the medical and pathological reports of the Middlesex Hospital for the ten years 1880–89. During that period eighty-five cases had been admitted with the diagnosis of typhlitis or perityphlitis, of which eighty-four had recovered (in three fatal cases included in 1889 the diagnosis was altered post mortem) and one had been "discharged at own request." Apparently only two of the cases had been submitted to incision (1889). These figures showed that "the measures generally employed by physicians" were not without success, and they to some extent indicated the degree of need for surgical interference. During the same period, in fourteen cases in which the appendix was found on necropsy to be perforated the diagnosis on admission had been (generally) peritonitis (? typhlitis) or (?) enteric fever (one case), pyo-pneumothorax, &c. In none were the signs sufficiently definite to allow of a positive diagnosis of typhlitis. Twelve of these cases were fatal from acute peritonitis, in three of which there were old lesions about the appendix. A concretion was found in nine cases; in six cases it was still in the appendix. With regard to operation, he agreed with Mr. Pearce Gould's views: where the diagnosis was acute peritonitis (? typhlitis) laparotomy was indicated; and in all other cases the early treatment should be that at present adopted. No absolute rules could be given as to the time for incision, but the persistence of a high temperature after the fifth day suggested suppuration. Medical treatment in the early stage could not be said to have failed, even should incision ultimately become necessary, as by localising the pus it saved the patient from general peritonitis. He was opposed to the removal of the appendix. Relapsing perityphlitis in a labouring man who could not afford to rest might be treated by operation, but other cases he thought had better be left alone.—Mr. CHARTERS SYMONDS referred to a case which he had published in 1885, the patient being a young man aged twenty-three, who was subject to repeated attacks of abdominal pain. He had six attacks of acute pain in the five weeks previous to admission, and there was a rise of temperature, with a swelling in the right iliac fossa. This swelling subsided, leaving a lump the size of a marble, and he was discharged. He speedily returned with another attack, so an incision was made like that for tying the external iliac artery, and a calculus was found in the appendix. The concretion was removed, the appendix stitched up, and, though a sinus remained open for some time, the patient ultimately got quite well, and had had no attack since. This, he thought, was a case of relapsing typhlitis of a kind in which operation was quite justifiable. He agreed with Mr. Gould that it was usually not necessary to remove the

[1] Med. Chir. Trans., vol. lxxi., p. 171.

vermiform appendix, and he referred to three cases in which after simple opening of the abscess the patients recovered. The abscess should be thoroughly irrigated out and a concretion sought for, due care being taken not to disturb the adhesions.—Mr. JESSETT considered that the cases which the authors had related showed that early operation must be a proper procedure; the risk to life was certainly not so great as if the diseased appendix was left behind. If an abscess formed which was shut off from the peritoneal cavity, then the appendix might be left. In dealing with the stump of the appendix, he suggested that it should be invaginated into the cæcum and held there by stitches.—Mr. ALLINGHAM, in reply, said that in both the cases he had dealt with it was impossible to tell at the time of the operation precisely what the condition was, and therefore the median incision was adopted. As a matter of fact, he had found that to deal with the appendix from the middle line was just as easy as to deal with it from the side. The boy he showed had worn an abdominal belt since the operation, and the yielding of the cicatrix was to be explained in his case by the special circumstances detailed in his paper connected with the healing of the wound. In neither of his cases was there any localised abscess. He suggested that these cases might be divided into three classes: first, the very acute cases, like the two he had related, which were severe from the beginning; secondly, the acute cases supervening on chronic attacks; and thirdly, the very chronic cases. In those of the first class the sooner operative interference was adopted the better. In the second class operation was also surely advisable, for he was quite unable to understand why a man should be left with an abscess to burst where it wished; it would be sounder surgery to cut down over the indurated part, and let the pus out as soon as it had formed. He had been looking through the necropsy records at St. George's Hospital, and had found that the fatal cases were all due to trouble in the appendix, and not in the cæcum.—Mr. SUTTON, in reply, regretted that his references to the treatment adopted by physicians had been misunderstood. There had certainly been no epidemic of removal of the appendices at the Middlesex Hospital, and the six cases he had related represented the whole of his practice. Mr. Treves seemed to fear that the result of wholesale removal of the appendix might lead to its suppression, but there was overwhelming evidence against the transmission of mutilations, consequently surgeons need not be apprehensive that their art would suffer in that direction. Speaking as a demonstrator of anatomy of many years' experience, he had never once failed to find the appendix, though it frequently lay out of position. The only instance of abnormality of the appendix he had met with was in a fœtus, in which it was represented by a dimple. Mr. Treves' observations bore on far too small a number of cases, and he illustrated this by his conclusions with regard to Meckel's diverticulum. The appendix might be regarded as an abdominal tonsil possessing adenoid tissue and glands, and pathologically this resemblance explained the morbid phenomena met with in respect of the appendix. Many people suffered from simple tonsillitis, and this condition in the appendix would account for the cases of appendicitis, which recovered under medical treatment. Others, however, resembled tonsillar abscess in running on to suppuration, and the very acute quinsies corresponded to sloughing appendices. He explained the greater frequency of appendix troubles in young people by the fact that affections of adenoid tissue generally were more common in early life. As to the greater frequency in males as compared with females, he suggested that part of the excess might be accounted for by the fact that the symptoms, when occurring in females, were usually put down to perimetritis. He admitted that notwithstanding this there would remain an unexplained preponderance of male patients. He never opened the peritoneum intentionally, but made his incision over where he believed the adhesions to exist. If he opened the abdomen, found a sloughing appendix and failed to remove it, he believed he would be as guilty as if he, in operating for hernia, returned a piece of gangrenous omentum into the abdominal cavity. The removal of the necrotic appendix shortened the convalescence, did away with a source of danger, and obviated the formation of a sinus. On the other hand, to carry out the plan he had adopted was simply to follow ordinary surgical axioms.—Mr. ANDREW CLARK, in reply, could not feel sure that if the appendix had been left in the second case the result would have been any better for the patient.

MEDICAL SOCIETY OF LONDON.

General Meeting.—Cases Illustrating Hepatic Surgery.

A GENERAL MEETING of this Society was held on March 2nd, Dr. Gilbart-Smith, Vice-President, in the chair.

The report of the Council for the past year was read and adopted. The total number of Fellows had reached 744, there being thirty-five accessions during the year. The Society regretted the loss of thirteen Fellows by death, including Dr. Henry Bigelow (of Boston, U.S.A.), Mr. C. H. Rogers-Harrison, Dr. Matthews Duncan, Dr. Gulliver, Dr. Pearce, and Mr. Bellamy. A new scheme for the administration of the Fothergillian Fund had been practically sanctioned by the Charity Commissioners by which the Fothergillian medal will be awarded triennially instead of annually, together with the sum of sixty guineas, for original work done during the previous five years, the first award taking place in 1893. It was announced with regret that Mr. Poole, who had faithfully served the Society as librarian for a period of twenty-five years, would resign on account of his health in the autumn. The reports of the hon. treasurer and hon. librarian having been received and adopted, the business of the ordinary meeting was proceeded with.

In the absence of Mr. Knowsley Thornton through illness his paper on Observations on Some Additional Cases illustrating Hepatic Surgery was read by Mr. MARMADUKE SHEILD. After recalling his two previous papers on the same subject read before this Society in 1887 and 1888, the author stated that the present series completed the whole of his practice in this branch of surgery to the end of January, 1891. He gave full notes of nine cases in which he had diagnosed gall-stones, had found and removed them in seven with complete cure, had failed to find a stone which was present in one, the patient dying, and the stone being found after death in the peritoneum; and in the remaining case found hydatids to be the cause of obstruction instead of gall-stones, the patient making a smooth recovery. He then referred more briefly to seven other cases in which he had operated and found pathological conditions having a more or less important bearing upon hepatic surgery. One of these was a large hydatid cyst of the liver, which had been diagnosed by several physicians as disease of a much more serious character. The patient recovered. Two were cases of malignant disease, one a case of doubtful nature, and one of chronic pain, and adhesion after the passage of large gall-stones. In none of these did he consider before operation that the indications pointed to the presence of gall-stones. In one other case he operated, expecting to find gall-stones, but found nothing definite to account for the attacks of pain, and though temporary relief followed the exploration, there had been recently fresh attacks of pain. The last case was one of very large tropical abscess of the liver in a gentleman aged sixty-three, in which unusually rapid recovery followed free incision and drainage. Commenting on the whole series, he claimed the results as good, and amply justifying the operative procedures. At the same time there was sufficient uncertainty and failure to show that it was to more perfect diagnosis that our attention must be directed. This would be greatly aided by more frequent exploration in doubtful cases. He dwelt upon the important points in the diagnosis of gall-stones while still in the bladder, in the cystic duct, and in the common duct, and emphasised from two of the cases recorded the danger of attempting to force the stones through by massage; and also pointed out that adhesion of the gall-bladder to the right kidney was a potent source of error in diagnosis, both from the position of the swelling and the sympathetic renal symptoms induced. He claimed three entirely new departures in this branch of surgery: 1. Direct incision of the common duct and removal of the stone, with complete suture of the opening without opening the gall-bladder. 2 Incision into the common duct, needling the stone into fragments, and closing the duct over the fragments, leaving them to find their own way into the duodenum. 3. Leaving the gall-bladder open in the peritoneum with efficient provision for drainage through the abdominal incision in cases in which it is impossible to suture it into the abdominal wound, and not advisable to attempt complete intra-peritoneal suture. In the latter cases, and in all cases where fouling of the peritoneum was possible, he strongly advised a counter opening above the

pubes, and additional drainage by means of a glass tube in the pouch of Douglas.

Sir JOSEPH FAYRER congratulated the author on including the unfavourable as well as the favourable data with regard to his cases. He himself had seen practically nothing of the surgery of the gall-bladder, but he had had a very large experience of hepatic abscess. He quoted two cases of calculus of the gall-bladder in which nature had relieved herself; one patient came to him with a history of long trouble in the hepatic region and a sinus at the umbilicus. He recovered completely without operation, passing twelve gall-stones by way of the umbilical opening. Another case was that of a lady, the wife of a medical man, who was very ill and suffering from severe hepatic colic and jaundice. On deep palpation an enlarged gall-bladder was felt, the outline of the stones being distinctly perceptible. He advised waiting a day or two before operation, and during this time all the gall-stones were passed by the bowel, the manipulation for the purpose of diagnosis having probably dislodged them.

Dr. GILBART-SMITH, speaking of massage, was reminded of a case which he had seen seven years ago. An old gentleman was at the point of death and complained of abdominal pain, and presented a hard lump in the neighbourhood of the gall-bladder. Malignant disease had been diagnosed by others, but after examination he himself, inclining to the belief that it was gall-stone, ordered gentle massage over the neighbourhood of the swelling, with the local application of hot fomentations and the administration hypodermically of strychnine and digitaline every two hours to stimulate the failing heart. Two days later he passed a large gall-stone, and had since remained well. The frequency with which patients, after abdominal palpation, passed gall-stones which had previously given trouble suggested that massage in many cases might be rightly and beneficially employed. To illustrate the value of exploration in abdominal disease he related two cases. A patient with pyloric obstruction died within a week of his first seeing him; malignant disease had been diagnosed and operation advised against. At the necropsy a duodenal ulcer was found caused by an impacted gall-stone. Some years later this patient's brother came to consult him, suffering from a condition which had been diagnosed as cirrhosis and ascites. But absence of alcoholic history and the peculiar character of the abdomen on percussion were against this idea. Fluid of an inflammatory character being withdrawn, a tumour in the epigastrium presented itself, which was variously diagnosed as abscess, malignant disease, and enlarged spleen. A week later, under exploration, eleven pints of dark-green fluid were evacuated, which proved on examination to be decomposed blood. The patient recovered, a result which could hardly have been hoped for had it not been for the exploration. He referred to one other case where a cyst was opened which was thought to be hydatid. It was really connected with the kidney, and it unfortunately drained into the peritoneal cavity, leading to a fatal result.

Dr. ALTHAUS said that one of the syphilitic cases referred to had since come under his care, and was progressing favourably under antisyphilitic remedies.

Mr. JOHN TAYLOR of Birmingham said that his experience of hepatic surgery was mainly confined to the operation of cholecystotomy, which, though not needed in quite so many cases as he had at one time thought, was useful in obstinate instances of biliary colic, in cases of distension due to obstruction of the cystic duct, and in suppurative cholecystitis. Phosphate of soda he had found to relieve most cases of hepatic colic arising from biliary calculi. In cases of calculus impacted in the cystic duct, when all efforts to seize it or break it from within had failed, three resources remained: either to crush it from outside the duct, or to extract it through an incision in the duct, or after cholecystotomy to inject fluids which were either solvent or helpful towards spontaneous cleavage or removal. The two former methods he looked upon as dangerous, whereas the third in his hands had proved efficient. He injected a solution or emulsion of the tauro-cholate of soda twice a day into the gall-bladder, and this speedily produced separation, breakage, and evacuation of the impacted stone. The removal of the obstruction was indicated by the discharge of bile from the wound, and the incision, as a rule, healed a few days later.

Mr. M. SHEILD referred to Murchison's remarks on the similarity between hepatic gummatous projections and cancer formations. In a young man presenting hepatic nodules the thought of syphilis should ever be present, and mercurials with iodide administered for the purpose of diagnosis. He related a case which he had seen two years ago which had been pronounced to be of a cancerous nature, but in which the adoption of this method of treatment led to a favourable issue.

Dr. SIDNEY COUPLAND had had no personal experience of the treatment of gall-stone in the ways suggested by the author. Evidently a considerable advance had been made, when not only were dilated gall-bladders attacked, but the bile duct itself had been successfully dealt with surgically. It was a question how long patients should be allowed to suffer with hepatic colic before being submitted to surgical treatment.

The following officers were elected to serve during the ensuing year:—President: Dr. Richard Douglas Powell. Vice-Presidents: Drs. Stephen Mackenzie and W. H. Allchin, and Messrs. Reginald Harrison and W. Rose. Treasurer: Mr. A. E. Durham. Librarian: Dr. W. H. Allchin. Honorary Secretaries: Dr. T. Colcott Fox and Mr. A. Marmaduke Sheild. Honorary Secretary for Foreign Correspondence: Dr. Jean S. Keser. Council: Drs. Frederic Bradshawe (St. Leonards), T. Churton (Leeds), C. J. Cullingworth, A. E. W. Fox (Bath), G. Allan Heron, Donald W. C. Hood, Percy Kidd, Isambard Owen, C. E. Sheppard, and Messrs. H. W. Allingham, C. A. Ballance, J. Astley Bloxam, W. Watson Cheyne, Alban Doran, D. H. Goodsall, W. F. Haslam (Birmingham), C. Bell Keetley, Stephen Paget, Bernard Pitts, and J. Knowsley Thornton.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Present Position of Disinfection.

A MEETING of this Society was held on Feb. 13th, Mr. H. E. Armstrong, President, in the chair.

Mr. WYNTER BLYTH, in introducing this question, wished to confine his remarks to one important change that our ideas on the subject had undergone within the last few years. When Professor Koch, in 1881, gave to the world the first results of his inquiries into the relation of micro-organisms to disease, it was the general inference that pathogenic microbes, or those concerned in the propagation of diseases of the infectious kind, were exclusively or nearly so of the spore-bearing class, and that, since the spores of all such organisms possessed great inherent vitality, no so-called method of disinfection could be deemed thoroughly efficient which did not succeed in destroying the vitality of the spores of bacillus anthracis, the most resistant of all. Now, however, that the nature of pathogenic microbes was no longer a matter of conjecture, those of most specific diseases having been identified, it was found that the bacillus anthracis could not be looked on as typical of the whole class, since the greater number, including such well-known forms as those of cholera, enteric fever, epidemic diarrhœa, septicæmia, and erysipelas, were not sporiferous, but occurred as micrococci, streptococci, or bacilli, very feebly resistant to heat or chemical agents. It was therefore unnecessary to have recourse to powerful chemical substances, the use of which was attended by obvious practical difficulties. In a paper read before the Royal Society he had pointed out the importance of temperature, time, and space as factors, and had shown that under appropriate conditions such simple measures as limewashing and aeration were in most cases amply sufficient for disinfection. Recent experiments, as those of Behring and of Pfuhl, published in the *Zeitsch. f. Hyg.*, had proved the remarkable efficacy of lime. Boer had observed that while the addition of very small quantities of lime to culture fluids greatly favoured the development of the bacteria, larger quantities or the equivalents of potash or soda, producing an alkaline reaction equal to what was known as 50° of normal acidity, were speedily fatal to all pathogenic organisms in any form other than the spore. Thus the strongly alkaline soft soaps were far better germicides than the much vaunted carbolic, thymol, or terebene soaps, and stripping off the wall paper, limewashing of walls and ceiling, with scrubbing of the floors and woodwork of a room with soft soap, were generally sufficient for all the purposes of disinfection. Lime, from its power of absorbing sulphur compounds and other offensive gases, while it was itself inodorous, was speci-

ally suited as an application to the contents of street gulleys, in the removal of disinterred corpses, in mortuaries, and in nearly all cases in which it would not cause the evolution of ammonia. For deodorising stable manure and excreta he thought that the acid sulphates, which would fix the ammonia, and not detract from the value of the manure, would be found preferable to carbolic powders. In the disinfection of rooms he now believed that sulphur fumigation was a useful addition to limewashing &c., though at one time he was very doubtful as to its efficacy; but he held that all disinfection should be composite. He was inclined to the belief that the danger of infection being carried by the clothing of persons visiting the sick had been exaggerated. He did not deny that it might be conveyed by attendants who had been, so to say, "soaking" all night in the poisoned atmosphere, but it was quite a different matter with medical men and inspectors, whose exposure to the infection was of short duration.—Dr. SWETE called attention to sec. 5, subs. 3 of the Infectious Diseases Prevention Act, and described his practice of fumigation with sulphur and hot limewashing, not whitewashing. He considered that the state of the atmosphere, especially as regards humidity, had an important influence in the conveyance of infection on the person.—Dr. SYKES narrated his experience of the immense value of quicklime in the removal of 2000 bodies and 4000 tons of the most horribly offensive earth from St. James's churchyard, in the parish of St. Pancras, to the extramural cemetery. As the ground was opened quicklime was thrown in, and the stench at once ceased. The coffins were placed in wooden cases with lime, and at first lime was spread over the loads of earth; but complaints being made by the residents in the streets through which the carts passed, he substituted clean earth, when no more complaints were raised. The graveyard had been closed for twenty years, and the condition of the bodies was awful; indeed, without the lime the operation would have been impossible. He objected, however, to the use of lime in mortuaries, preferring to irrigate the place with a 50 per cent. dilution of Burnett's fluid, which was a 4 per cent. solution of zinc chloride, a powerful disinfectant and quite inodorous. He called attention to a description in the first number of the *Hygienische Rundschau* of the admirable arrangements of the refuges recently opened in Berlin, where the persons admitted were treated to a bath while their clothing was being disinfected in a steam chamber. Recent German researches appeared to establish the superiority of current to pressure steam, the steam being admitted above, and its temperature observed at its exit below.—A gentleman suggested that the advantages of current and high-pressure steam might be combined by making the aperture of exit smaller than the inlet, or by fitting the two pipes with safety valves of unequal power.—Dr. WILLOUGHBY supported this suggestion, fearing that current steam might otherwise tend to follow the lines of least resistance without penetrating the entire mass of bedding &c.—Mr. HOLLINSHEAD said that in the midlands the removal of midden refuse and the contents of pails was a serious question. He used a mixture of powdered sulphate of iron and sulphate of lime, which he found both cheap and effective.—Dr. CAIGER, as medical officer to two large fever hospitals, had frequently had to disinfect wards, the walls of which had been saturated for months with the poison of one or other fever. He used soft soap and limewashing, followed by free aeration, and had never found the patients subsequently admitted contract the fever that had been treated in the same ward previously. He did not use sulphur fumigation. There were regulations as to bathing and change of clothing by nurses going out of the hospital; but, looking to the fact that at certain times one could not expect a woman to take a bath before going out of doors, the regulations in respect of bathing were in some cases a dead letter. Yet though he had given 12,000 passes in one year, he was not aware of any infection by their means. In the laundry clothes were exposed to steam for twenty minutes before soaping.—Dr. GIBBON, when in the country, had often known scarlatina carried out by nurses to the neighbouring villages. He objected to odorous disinfectants as likely to conceal instead of destroying other odours, and he was surprised that no mention had been made of corrosive sublimate, the most powerful and inexpensive of all disinfectants.—Dr. WOODFOORD observed that he always employed it.—Dr. NEWSHOLM recommended it for the disinfection of enteric stools.—Dr. CAIGER believed that persons who had for weeks breathed an infected atmosphere continued to exhale the poison for some days afterwards, and that thus the frequent experience of fevers being propagated by discharged patients, notwithstanding the thorough disinfection of their persons and clothing, might be explained.—Dr. VERDON invited inspection of the disinfecting chamber at Lambeth, where steam was injected into a Neville's baking oven, the temperature of which had been previously raised to 360°F., the iron trays &c. being covered with asbestos to avoid the scorching of clothing &c.—The PRESIDENT deprecated any hasty expressions of opinion such as might be calculated to put the public off their guard. It was also a question whether lime might not occasionally act as a preservative of infection.—Mr. BLYTH, in replying, insisted that all recent research tended to show that time was a most important factor. Given unlimited time, comparatively low temperatures were effective, and intermittent heating below 100° C. might be well employed in the disinfection of such articles as kid gloves, which would be damaged by higher temperatures. In connexion with Dr. Caiger's last remarks, he referred to Oertel's discovery of the bacillus of diphtheria in the throats of convalescents three weeks after apparently complete recovery, and suggested that such might be the case also with scarlatina. Puerperal septicæmia was, he believed, mostly communicated through the finger-nails of the medical attendant, a source of danger not obviated by any change of clothes or ordinary bathing.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Feb. 4th, Mr. C. H. White, President, in the chair.

Abdominal Section for Inflammatory Diseases of the Pelvis. Mr. MICHIE read a paper on this subject, and gave among other statistics particulars of twenty-nine recent cases in his own practice, with but one death. He laid stress upon the necessity of avoiding as far as possible manipulation of the intestines, of providing free drainage, and of evacuating the bowels after operation by the careful use of enemata. He was opposed to the use of saline purgatives for this purpose. In his practice the results obtained by such treatment had not been nearly so favourable as those attending the former method. Having described the various forms of pelvic inflammation, he stated that he omitted pelvic cellulitis from the list because he had never met with a case.

Fibrinous Casts.—Mr. F. M. WRIGHT exhibited Fibrinous Casts expectorated by a male patient aged twenty, still under his care, with plastic bronchitis. The first attack had occurred two years before, and between this and the last there had been occasional slight recurrences. The symptoms were never very serious or acute, but the material expectorated was always more or less fibrinous in character. One curious physical sign was a shrill whistling sound to be occasionally heard over affected patches of lung.

Aspiration for Chronic Sanguineous Pericardial Effusion.—Dr. HANDFORD related this case, which occurred in a miner aged twenty, who was admitted complaining of vomiting and pain at the stomach. There was never any precordial pain or difficulty in swallowing. He had not had rheumatism or other serious disease. His illness began four months previously and kept him in bed nine days. After that he worked a fortnight. Subsequently he kept his bed more or less till admission. The sickness was soon relieved, but he continued to complain of pain and distension at the epigastrium. The liver was greatly enlarged, but not tender; vertical dulness six inches and a half. He had slight cough. The pulse was very small and irregular. There was an area of dulness extending from the first left intercostal space to the sixth rib, and from a variable distance to the right of the sternum to the mid-axillary line. Over this area the breath sounds were audible in varying degrees of intensity, and the heart sounds were feeble and distant. There was no impulse, and the apex could not be localised. The left back was hyperresonant and the breathing bronchial. The urine was free from albumen. The temperature continued normal. Pericardial effusion was diagnosed, and he was treated by rest and iodide of potassium. After a month general œdema of

the extremities and ascites came on. Aspiration of the pericardium was contemplated, but it was decided to wait. The abdomen was tapped, digitalis was added to his medicine, and in ten days all his œdema was gone. For some time he improved in general condition, but the physical signs did not alter. On Jan. 10th he rapidly became faint and pulseless without known cause. In two days, by the assiduous use of warmth and stimulants, he had considerably improved, and it was decided to aspirate the pericardium. A fine needle was entered in the fourth space about one inch outside the nipple and on the same level. Eleven ounces of coffee-coloured fluid were removed, when the pulse began to flutter, and it was thought wise to withdraw the needle. He was much relieved for two days, but became collapsed again, and died three days and a half after the tapping. At the necropsy the pericardium occupied almost the whole of the left chest, the lung being invisible from the front, collapsed, and pushed to the back. The pericardium was much thickened and the sac contained over forty ounces of fluid as described, making more than fifty ounces in all. The heart was small and covered with shaggy lymph. The mark of the puncture could not be traced, and there had been no leakage of pericardial fluid into the pleura. There was extensive perihepatitis. As the pericardium was evidently quite incapable of absorbing, Dr. Handford's chief regret was that he had not aspirated much earlier and removed more fluid.

Thrombosis of the Vertebral and Basilar Arteries.—Dr. HANDFORD showed this specimen, which was taken from a man aged sixty, who had had syphilis many years ago. Failure of sight had been coming on for ten years. There was some atrophy of both discs, remains of syphilitic choroiditis, slight retinitis pigmentosa, and a few bright spots, probably cholesterin. There were no hæmorrhages, no hemianopia, and no ocular paralysis. The pupils were equal, and reacted to light and accommodation. Six weeks before admission he had what he thought was a bilious attack, accompanied by severe occipital headache, which had continued ever since. Within forty-eight hours right hemiplegia became complete. There was no loss of consciousness. The face appears not to have been affected, and there was certainly no aphasia or breathlessness. But for several days difficulty of swallowing was great. This afterwards completely passed off. On admission the leg had improved so that he could stand and walk with assistance, and the arm was gaining power. The radial and temporal arteries were not much thickened. There was no paralysis of the lips or tongue, but the soft palate and larynx were unfortunately not examined. The very gradual onset pointed to thrombosis rather than embolism or hæmorrhage. The difficulty of swallowing localised the lesion to the pons and medulla. The history of syphilis and the choroiditis suggested syphilitic arteritis as the cause. He was treated with iodide of potassium and saline aperients. The paralysis continued to improve, and the headache greatly diminished. But after a fortnight he had a sudden attack of unconsciousness, and died in twenty minutes. At the necropsy the left vertebral, which was in the same straight line with and formed the main supply of the basilar, was blocked by an old-standing, adherent, partially decolourised clot. The right vertebral showed a quite recent thrombus, and the upper end of the basilar was also occluded. There was some opacity of the membranes, subarachnoid effusion, and a small quantity of fluid blood under the arachnoid on the upper and posterior part of the cerebellum. No softening could be detected by the naked eye. All the vessels at the base of the brain were more or less thickened by syphilitic arteritis. The kidneys were somewhat granular. The cause of his sudden death was apparently the blocking of the second vertebral and of the basilar, causing anæmia of the respiratory centre.

A special meeting was held on Feb. 20th, Mr. C. H. White, President, in the chair.

Dr. W. S. PLAYFAIR delivered an address upon the Neurotic Complications of Uterine Disease, in which he uttered a warning against the irrational treatment of more or less imaginary physical ailments of the female generative apparatus, followed by a description of neurasthenia arising from a combination of conditions especially common in parturient women. In conclusion, he described his own treatment for the latter conditions especially following principal headings—viz, altered surroundings, rest, nursing, massage, electricity, feeding. During the delivery of the address photographs were exhibited illustrating the remarkable improvements brought about by this system of treatment in suitable cases.

A vote of thanks to Dr. Playfair, proposed by Mr. Joseph White and seconded by Dr. Ransom, was carried with acclamation.

MANCHESTER CLINICAL SOCIETY.

AT the meeting held on Feb. 17th, Dr. BRADDON, President, in the chair, the following communications were made:—

General Cystic Degeneration of the Kidneys.—Dr. BUCKLEY reported a case of this kind in a woman aged forty-two. The patient when admitted into the Clinical Hospital was suffering from symptoms simulating bowel obstruction, the colon being greatly distended with solid fæcal accumulation, which obscured the recognition of renal enlargement until emptied. At first there was a complete absence of symptoms pointing to kidney mischief, the urine being free from albumen, blood, or pus. Three days before death albumen was present, the appearance of which was quickly followed by uræmic convulsions, in one of which she died. The intellect remained clear between the attacks, uræmic coma never supervening. Both kidneys were found to have undergone complete cystic degeneration, the cysts varying in size from a pea to a walnut. The cysts contained a serous-like fluid varying in colour from light yellow to deep purple. The fluid contained albumen, but showed an absence of urea and uric acid. The left kidney weighed 28 oz. and the right 22 oz. Similar cysts were also found in the liver. No trace of hydatids could be found. There was also disease of the aortic and mitral valves, with left cardiac hypertrophy.

Treatment of Prostatic Retention of Urine.—Mr. SOUTHAM made some remarks on this subject, and mentioned two cases where, ordinary palliative measures having failed to give relief and self catheterism being impracticable, the patients had regained the power of voluntary micturition, in one instance after division, in the other after removal of the obstructing portion of the prostate gland through a supra-pubic opening.

Peritonitis.—Dr. HUTTON read notes of a case of peritonitis occurring in the course of an attack of tuberculosis, treated by incision and free drainage, with very satisfactory results. In commenting upon this case, Dr. Hutton mentioned others in support of his contention that it is by no means uncommon for all the symptoms of tuberculosis to subside and for health to be restored in cases where the peritoneum, the lungs, and even the meninges of the brain have been the seat of disease.

Dr. OWEN made some remarks upon the treatment of Spasmodic Affections in Childhood, and showed several cases.—Dr. HILL GRIFFITH showed a case of Vascular (?) Protrusion of the Eyeball.

Reviews and Notices of Books.

Studies of Old Case Books. By SIR JAMES PAGET, Bart. London: Longmans, Green, & Co., and New York. 1891.

IT was good reading for the profession when the Messrs. Longman intimated a few weeks ago that they were about to publish some results of Sir James Paget's dip into his old case books. Medical practice is a mine of experience, and the case book of any ordinary observant and intelligent practitioner, whose term of practice has extended over forty years, would repay examination. How much more the records of the cases seen by such a student of nature and of disease, or perhaps of disease as a part of nature, as Sir James Paget. He, it is true, in the preface—that most important part of a book, in which the author most reveals his mind—makes light of the value of old case books, his own amongst others. He argues that the reports of the daily progress of his cases forty years before the introduction of the antiseptic system

would be well-nigh useless and uninteresting. But we scarcely subscribe to this conclusion—which is partly qualified indeed by Sir James Paget's own remark that "they would give evidence of considerable success under treatment which would now be justly deemed utterly negligent." Whether they supply evidence in this happy direction, or only show that the success in any given class of cases was less then than now, they would still be full of instruction and interest. It may, indeed, be confidently said that in the literature of our profession we have too few "case-books." We might in this gather a lesson from the lawyers, who so quickly and patly refer one to "cases." Our "Practice of Physic" is too much systematised, too mechanical, too much cut-and-dried. Hence our disappointment in actual practice to find description that does not fit living and actual cases. It is the genius of men like Sir James Paget which gives life and nature to our notions of disease, which reproduces cases in their flesh-and-blood form and connexions, and in their details. In this view we hail the Studies from the "Old Case Books," which, for want of leisure, ceased to be written much after 1870.

The mere enumeration of the heads of the chapters of the "Studies" will be the best indication to our readers of the varied nature of the contents of this book, with the remark that the chapters consist not so much of the history of cases as of comments suggested to the thoughtful mind of the author by the chief facts of them. The chapters are seventeen, and are thus headed: I. Periostitis following Strains. II. Diseases of the Metatarso phalangeal Bursæ. III. On Some Diseases of the Corpora Cavernosa Penis. IV. On Spines Suspected of Deformity. V. Obscure Cases of Caries of the Spine. VI. Perforating Ulcer of the Septum of the Nose. VII. The Detection of Abscess. VIII. Errors in the Caronometry of Life. IX. Residual Diseases. X. Diseases of Structure due to Disturbance of Nerve Force. XI. Diabetic Gangrene. XII. Subcutaneous Ulceration. XIII. Ununited Fractures in Children. XIV. Swellings above the Clavicle. XV. An Irregular Pulse. XVI. Single Rare Cases. XVII. Use of the Will for Health. Such is the rich store of reflection and experience provided for the readers of this volume. We are far from believing, however, that it exhausts the interest or the lessons of Sir James Paget's "Old Case Books." It may be that his own leisure or disposition for working at the mine may be limited; but it would be well if he would think seriously of further dips into the treasury, either personal or vicarious, with the view of bringing out of it things new and old. No advance in either pathology or treatment much affects the value of the experience and observation of such minds as Sir James Paget's. Heberden's commentaries are as valuable to-day as if Bright and Addison had never lived, and all the triumphs of antiseptic surgery do not lessen the value of the works of John Hunter. We will not attempt to discuss in detail the above chapters, or to take from the freshness of them by any analysis of their contents. The study of them will make every man more likely to achieve accuracy of diagnosis and wisdom of treatment and forecast, not only in regard to the particular groups of disease under discussion, but in the very habit and attitude of his mind in the daily practice of his profession. If we may single out individual chapters that have most interested us, we should specify the first on Periostitis following Strains; the fifth, on Obscure Cases of Caries of the Spine; the eighth, on Errors in the Chronometry of Life; and the ninth, on Residual Diseases. The fundamental virtue of Sir James Paget's description of cases is in his quick and strong sense of what we may call the physiology of disease and the relation of facts and cases which to common or careless observation seem altogether unrelated.

Studies in Statistics: Social, Political, and Medical. By GEORGE BLUNDELL LONGSTAFF, M.A., M.B., Cert. Preventive Medicine, Oxon., F.R.C.P. With Maps and Diagrams. London: Edward Stanford. 1891.

[FIRST NOTICE.]

THE true and sufficient reply to the oft-quoted allegation that one can prove anything by statistics is that without them one can prove nothing. This book might not inappropriately have been styled Studies in Demography, for it deals with the vast problems affecting or arising out of the life conditions of peoples as deduced from a study of statistical data.

The nature, scope, variety, and thoroughness of this volume make a notice of it an embarrassing task to the reviewer. To afford anything like an adequate idea of the book presupposes the possession on his part of considerable analytical power and painstaking. But we fear that even then the result would, after all, prove inadequate, save by the absorption of an amount of space altogether beyond the limits at our disposal. "Studies in Statistics" might be thought abstruse and uninteresting; but these studies raise so many points, are so suggestive of thought, and the facts are set forth with such perspicuity that many readers will feel that they are taking part, as it were, in a personally conducted tour through new countries, and prospecting the future from the appearances of the present. The author wisely decided not to overload his work with long arrays of figures and tables. For these he has substituted maps and diagrams for the most part, and by a free use of the graphic method he has rendered his treatment of the subjects in hand clear, purposive, and attractive. The care and labour bestowed in their production and in that of the work itself must have been very great. As the author says in his preface, the numerous and voluminous reports on the very dusty shelves of the library of the Statistical Department of the General Register Office form a vast reservoir, into which a ceaseless stream of facts has been flowing for more than half a century. To disturb the dust upon those shelves; to sort out facts; to group, arrange, compare, and ponder over them, has long been his hobby. Nor have his labours been circumscribed within these limits. They have been extended into considerations of the phenomena of human life as these are unfolding themselves in other countries, communities, and races—the growth, fluctuations, migrations, and food supplies of populations, the admixture of races, and, by a legitimate exercise of the scientific imagination, the potentialities and probable political influences of these factors on the future history of the race.

The first three chapters are introductory in character. Chapters IV. to XII. consist of an exposition of the more striking facts and results of the growth of population in Europe, America, and the British colonies within the last half century; Chapters XIII. to XXI. are mainly technical and medical; and a short concluding chapter closes with the following paragraph: "My hope throughout has been that increased knowledge of facts, alike in matters political and matters medical, may tend to make legislative and administrative efforts more reasonable, and less empirical. Some progress is more likely to be attained by the diligent and patient study of details than by the more showy and more attractive method of *a priori* speculation, which is but too apt to lead to rash and possibly disastrous experiments."

A careful perusal of this book would no doubt be profitable as a preparatory course of study to many a would-be philanthropist provided with some brand new scheme for ameliorating the social condition of the masses. It would serve to indicate, at any rate, the complex nature and vast scope of the problems that have to be solved.

In the first essay on Death-rates, the author, speaking of the difference between the sexes in this respect at certain periods of their lives, remarks that the well-known greater length of life attained by women to a large extent accounts for their numerical excess in this country, and that their occupations, habits, and probably some constitutional differences, account for this superior longevity; but he does not see his way to explain satisfactorily the great excess of mortality of male infants in the first year of life (which almost disappears during the second), unless it depends upon some constitutional difference. The author points out and explains the sources of fallacy underlying the vulgar notion that a high death-rate is no proof of sanitary defects, but is attributable to, and can be accounted for by, the high birth-rate, since the mortality of young infants is well known, and large towns giving high death-rates have also commonly excessive birth-rates. And as regards the assertion that epidemics do not, on the whole, materially affect the general death-rate, since their action is to kill off those who would have died from some other cause had there been no epidemic and those who were already in bad or feeble health, with the result of lowering the death-rate for the years immediately following, Dr. Longstaff properly remarks that, while there may be some truth in these assertions, the permanent injury to the constitution of those attacked by the epidemic has to be borne to mind. We have, in short, to deal not only with the killed, but with the wounded. He then proceeds to illustrate this and the effect of epidemics on the general death-rate. The cholera epidemic of 1849, and the terrible sufferings of our troops before Sebastopol in the winter of 1854–5, were the main causes of that movement in public opinion in favour of sanitary legislation and improved sanitary practice which has resulted in our remarkable freedom from serious epidemics and a striking fall in the death-rate in the last fourteen years.

Chapter IV. deals with the growth of population in England, Chapter V. with the migrations of the people in the nineteenth century, and Chapter XI. with the population of London and its migrations. The facts and figures contained in these sections will essentially concern the members of the proposed Royal Commission on Labour. The recent increase of population is absolutely enormous; such an increase has taken place during the last fifty years in Europe and in the new worlds of the west and south as has never been seen before. The opening up of new land and new countries afforded unlimited employment and supplies of food, and the great expansion of the nineteenth century is not only exceptional, but absolutely unique. Dr. Longstaff sums up the causes that have led to the remarkable developments of the past fifty years in a sentence. The application of novel mechanical appliances has rendered possible an unparalleled increase of population by bringing within reach unlimited supplies of food.

As regards births, England and Wales alone add 1000 a day to the population of the world. It is shown in a table that the natural growth of population in London is 133 a day, reinforced by thirty-two daily immigrants, mostly from the country districts. Assuming this rapid production of human beings to continue unchecked to the beginning of the next century, accommodation will have to be found in England and Wales by A.D. 1901 for some seven millions more persons than were enumerated at the last census, and more than half of this addition will be given to our already teeming cities and towns, the balance going to make up what may be conveniently, rather than accurately, styled our rural population—painfully suggestive, as Dr. Longstaff remarks, for the future of the people of England, if a comparison be made between the aspect and physique of our country and town-enlisted military and militia recruits.

On page 29 an estimate is given of the new public buildings that will be required by 1901 for the vastly increased population. And on the same page the earnest attention of economists is called to one of the results of modern legislation, with its increasing tendencies to State socialism and a "progressive" policy. Between 1875 and 1887 the National Debt was reduced by some 32½ millions sterling—a very satisfactory result for twelve years. But during the same period the indebtedness of the local authorities of England and Wales alone increased by no less a sum than 94 millions sterling. During the eight financial years 1880–88 the amount levied in rates has been increased by nearly 23 per cent.

Analytical Records.

MILK STERILISED BY THE PROCESS OF NEUHAUSS, GRONWALD, AND OEHLMANN.

(AGENT IN LONDON: F. H. GOTTLIEB, YEDDO GRANGE, LEWISHAM PARK.)

THE increasingly important subject of the supply of milk free from infection has received considerable attention on the part of the patentees of this process. They have made a praiseworthy attempt to deal with the difficulties which have hitherto baffled earlier experimenters, and much of the success achieved depends upon their correct interpretation of the cause of previous failures. The sterilising agent employed in this process is purely and simply steam, and the milk is submitted to its action in *open* bottles, and the stoppering of the bottles is accomplished during the exposure. A preliminary warming of the milk is, however, a fundamental part of the method, as while this brings about a temporary preservation of the milk, it also incites the germs of bacteria, especially those of a tenacious character, as the potato bacillus or the hay fungus, to development, thus ensuring their destruction in the condition of organism by subsequent treatment with steam. As regards the quality of the milk, better could not be desired, as a glance at our analysis will show, while the flavour can scarcely be distinguished from that of fresh cow's milk but for a very slight boiled taste. The milk was kept in a warm corner of our laboratory for a month without undergoing any apparent change as long as the stopper was not removed. Even after this the milk kept perfectly sweet for several days. The only drawback we find is the difficulty of getting the cream, which separates into clots, to mix satisfactorily again with the rest of the milk. The entire absence of antiseptics was confirmed. Analysis: Non-fatty solids, 9·49 per cent.; fat, 3·90 per cent.; mineral matter, 0·88 per cent.

ANGEL WHITE TOILET POWDER.

(GEO. C. BLACKWELL, LIVERPOOL.)

According to the results of our examination of this powder, it may justly be regarded as a specially refined species of fullers' earth. The powder, which is beautifully white and free from harmful ingredients, is composed of very finely divided silicate of magnesium and possibly aluminium. Fullers' earth is of similar composition, containing 53 per cent. silica, 10 per cent. alumina, and 9 per cent. of oxide of iron. This powder may therefore claim to have the healing and cooling properties which are attributed to fullers' earth, while the special purity of colour contributes to its value.

VICHY LIQUEUR.

(AGENTS, INGRAM AND ROYLE, 52, FARRINGDON-STREET, E.C.)

The special claim made for this liqueur is that it is prepared with the natural salts of Vichy water, and on this account it is esteemed a valuable digestive. Acting on this statement, we were prepared to find by analysis an appreciable

amount of the well-known salts which occur in natural Vichy water, as, for instance, the bicarbonates of soda, potass magnesia and lime, and the sulphate and chloride of sodium, which, with traces of iron and manganese, are present according to published analyses to the extent of 7·914 grammes per litre. An analysis of the liqueur, however, which we have purposely repeated, gives the following figures:—Absolute alcohol by volume, 39·74 per cent.; extract in 100 cc., dried at 100° C. (chiefly sugar), 35·62 grammes; *mineral matter*, 0·13 gramme per 100 cc. Neither chloride of barium or silver nitrate in an acid solution gave any positive result; the former reagent of course is used to indicate sulphates and the latter chlorides. The small amount of mineral salt, chiefly carbonate of soda, is, it cannot be contested, probably derived from natural Vichy water; but the proportion is so small that the liqueur can hardly claim to be an aid to digestion any more than are other concoctions of the same class. The flavour is decidedly pleasant, and is certain to be liked by those who are wont to indulge in this so-called "digestive."

CALVERT'S CRESO-CARBOLIC DISINFECTING SALTS.

(F. C. CALVERT & CO., MANCHESTER.)

Manufacturers of disinfectant compounds are recognising the desirability of employing a soluble rather than an insoluble substance to act as the vehicle for the distribution of disinfectants. Hitherto, insoluble substances like gypsum, kieselguhr, and various silicates were extensively used for this purpose, with the result that in not a few cases drain-pipes have been choked and stopped. The well-known firm of Calvert & Co. now manufacture under the name of "creso-carbolic disinfecting salts" a brick-dust coloured powder, perfectly soluble in water, which contains a high proportion of phenols. The base, from our experiments, is soluble sulphate of soda. On the application of heat the phenols are readily expelled, and can easily be recognised by the crystalline appearance of the tri-bromo-derivative produced on adding bromine water to the distillate. Another advantage attaching to a soluble disinfectant powder of this kind is that it may be used for the disinfection of cuts, wounds, and insect bites.

GRANULAR EFFERVESCENT PREPARATIONS.

(ALFRED BISHOP AND SONS, SPECKS-FIELDS, 48, SPELMAN-STREET, E.)

Granular effervescent preparations, as every practitioner knows, afford in many instances a convenient and acceptable form of administering drugs. Children, for example, will often take a preparation that "fizzes," although the medicament contained therein may happen to be nauseous to the taste. Messrs. Bishop were amongst the first to prepare compounds of this kind, and we have more than once had occasion to report upon their general excellence. Of recent effervescent preparations examined we have on record the following:—(1) Sulphur compound (Dr. Garrod's formula); (2) cascara sagrada, two grains in each drachm; (3) citrate of caffeine, three grains in each drachm; and (4) salicylate of soda, ten grains in each drachm. The results of our analysis are interesting, inasmuch as in the cases where the drug permitted of quantitative determination the presence of the proper quantities was confirmed. Thus the citrate of caffeine preparation, when treated with slaked lime and hot chloroform for the purpose of extracting the caffeine, yielded for every drachm of the powder 1·80 gr. caffeine, which calculates into 3·50 grs. of the citrate. Similarly the salicylic acid extracted from the salicylate preparation with ether when calculated into sodium salt amounted to exactly 10·30 grs. The sulphur compound readily gave up its sulphur to what is the best sulphur solvent, carbon disulphide. The preparations are readily soluble in water; whilst the excellent granulation indicates the care which is bestowed upon them in the course of manufacture.

COOMBS' EUREKA AERATED PASTRY FLOUR.

(W. A. COOMBS, NOTTINGHAM.)

Carbonic acid gas, though deadly poisonous to inspire, is probably one of the most useful agents which serve to produce a wholesome form of food, an agreeable form of beverage, and frequently a palatable form of medicament as in effervescent preparations. Carbonic acid, for instance, is generated by the action of yeast on sugar in the production of sparkling wines, and it is by the disengagement of this gas that bread is made light and porous. It is well known that carbonic acid is obtained from chalk and vitriol for the purpose of manufacturing artificial mineral waters, and ingredients which interact to produce this gas are frequently substituted for yeast in the production of a light dough. The action of yeast, however, is known to be uncertain, and it has occasionally been accounted the cause of the sourness in bread, which may not unreasonably be supposed to render it less wholesome. The microscopical as well as the chemical examination of Coombs' flour shows it to consist of pure wheaten flour, with the addition of a small quantity of a mixture of two substances like tartaric acid and carbonate of soda, which when moist of course evolve carbonic acid gas. The logwood test showed the entire absence of alum.

IMPROVED EFFERVESCENT CARLSBAD POWDER.

(S. KUTNOW & CO., 66, HOLBORN VIADUCT, E.C.)

The medicinal virtues of the well-known waters of Carlsbad depend on the presence of mineral salts, which analysis has shown to consist largely of the sulphates of soda and potash, in addition to small quantities of carbonate of lime, with which occur traces of the rarer salts of lithium and strontia. The water is accordingly reputed to be useful in rheumatism, gout, and kidney disorders. Kutnow's Carlsbad Powder is stated to contain, amongst other ingredients, the active principle of the Sprudel salt obtained direct from the mineral water. However this may be, our analysis confirmed the presence of the chief constituents referred to. The powder is beautifully clean and white, and is evidently prepared with care, while the taste of the effervescing solution is by no means disagreeable.

THE GENERAL PRACTITIONERS' UNION.

AT a meeting held at 29, Threadneedle-street, E.C., on Wednesday, March 4th, it was decided that the name of the Society be the "General Practitioners' Union," and that the objects of the Association be as follow:—To consider the question of the abuse of medical charities, to obtain evidence thereon, and to take such steps as may be necessary to safeguard the interests of general practitioners; to obtain increased and more efficient representation on the General Medical Council, especially for the purpose of forcing that body to exercise its powers in suppressing illegal medical practice; to supervise all legislative proposals calculated to affect the interests of general practitioners; to deal with all matters affecting medical men in general practice. It was resolved that every registered general practitioner should be eligible for membership and that the subscription should be 5*s*.

The following members were elected as a subcommittee to confer with the Charity Organisation Society on the subject of hospital abuses—viz., F. H. Alderson, F. H. Corbyn, J. Dawson, Hugh Woods, Geo. Brown.

WINDSOR INFIRMARY AND DISPENSARY.—The annual report for 1890 presents a favourable financial position compared with the previous year, but the income is still less than the expenditure. During the year 265 patients were admitted to the sick and convalescent wards; of these sixteen died—an increase in the mortality attributed to several cases being sent for admission in a hopeless condition. The committee had been enabled to reduce the balance due to the treasurer from £470 to £137.

THE LANCET.

LONDON: SATURDAY, MARCH 7, 1891.

THE factory surgeons have much reason to be satisfied with the debate on the Factories and Workshops Bill. Nevertheless, it is necessary that they should lose no time in organising themselves for the vindication of their office. Not a day is to be lost in preparing statements of their work. We would urge upon them to use every diligence in this matter. The masters and employers have evidently been sowing tares and bringing strong pressure to bear on the Government. Very likely, too, they have been assisted and supported in this matter by parents who are apt to think that children who should be at school might with profit be at work. For once masters and employers seem to have acted in agreement. It is high time, therefore, that the factory surgeons take counsel among themselves as to the best way of meeting this plausible attack on their office, which has so far overcome the Home Secretary, who is generally a sensible and a wise statesman. But the debate must have somewhat opened his eyes. It seems to us not only to have triumphantly vindicated the existence of factory surgeons, but to have shown that, so far from being disestablished, they should be strengthened in their appointments, and that the range of their duties should be extended. We very much misjudge Mr. MATTHEWS if he does not now see that the certifying surgeons are an indispensable if not a prime element in factory legislation. They represent the very humanity of the State. Unless Sir U. K. SHUTTLEWORTH, Mr. LENG, Mr. MUNDELLA, and others were all misinformed, they reject a considerable number of children. Mr. MUNDELLA said he had abundant evidence that they had not only frequently rejected children, but that their work had acted as a great deterrent in the matter of the employment of sickly, weakly, and diseased children. Their efficiency is not, however, to be judged by the number they reject; though, as Sir LYON PLAYFAIR showed, in one district alone (Dublin) in one year (1888–89) there were fifty-six refusals on account of age, eighty-four on account of infectious disease and debility, and thirteen on account of heart disease. As Dr. FARQUHARSON argued in his admirable speech, the very fact that children have to be examined by a factory surgeon has the effect of keeping back those who are unfit—either from age, or infirmity, or infectious complaint. Such influence is of the very kind that is needed—impartial, kindly, and, for the purpose, judicial. Well might Sir LYON PLAYFAIR say that the proposal to abolish the protection of the children by the examination of the factory surgeons was a most unreasonable retrogression in this kind of legislation, in regard to which the Conservative party has a reputation to lose. It may be that the payments should be made in part or altogether by the Government, as Mr. SHAW LEFEVRE argued. The State in this matter stands, as it were, *in loco parentis*, and in that view should perhaps pay for the protection of the children. But, at any rate, it will abdicate one of its most honoured and binding functions if it does not continue its protection to them in respect of ascertaining the facts as to age and physical fitness. And it can delegate this duty to none but to members of the medical profession. We agree entirely with Mr. MUNDELLA in this matter that the action of the factory surgeons should be extended. Their services should be utilised more freely in the way of occasional inspection of half-timers as well as for the purpose of giving an initial certificate. It is of enormous importance to this country, and to the credit of it, that it should show regard for the sanctity of young life. How else is the physical welfare of the people to be secured? We know what reckless waste of life has obtained in former days, and how slowly we have advanced in attempts to stop it. The factory surgeon is one of the safeguards most prized by no less an authority than Lord CROSS. It is inconceivable to us, after the discussion of Feb. 26th, that Mr. MATTHEWS will at a stroke and in the mere wantonness of a majority abolish what has worked so well. He may well ask to be excused inflicting such a blow, not only on factory surgeons, but on factory legislation. The opinions of Mr. BURT and Mr. BROADHURST, so temperately and yet so forcibly expressed, may well convince him that the best section of the working classes appreciate the provision of factory surgeons, and see in it no real enemy to these classes. By rejecting children who are too young or physically unfit for work, it not only preserves them, but by so much abates this—a most undesirable—competition with adult labour.

Let us emphasise, in conclusion, the practical advice we offer to the factory surgeons at the beginning of this article. They will make a great mistake if they allow the favourable tone of the debate as a whole to lull them into a sense of security. They must organise themselves so as to convince every member of the House, and especially those on the Government side, of the importance of the work they have to do. They must undeceive Mr. MATTHEWS in his amazing delusion that for years not a child has been rejected by the examining surgeon. The debate shows that the spirit of reasonableness and humanity which gave rise to the Factory Acts is not dead yet, but it needs to be carefully cherished and kept well "up to date."

WE have on more than one occasion adverted to the serious prevalence of enteric fever which occurred in the Tees Valley towards the close of September last, and to certain attempts which were made to dispute or to minimise the conclusion arrived at with respect to its cause being the drinking of the water supplied by certain companies deriving their supply from the river Tees. It would appear that some of the more interesting features of the epidemic involve the consideration of a number of complex facts, and that the full report on the subject may, in consequence, have to be delayed. Under these circumstances Dr. BARRY has submitted to the Local Government Board an interim report, the character of which can leave no doubt in the minds of unbiased readers that his original contention as to the cause of the outbreak is confirmed in the most convincing manner.

The Tees Valley contains a population roughly estimated

at 520,000, and it includes the towns of Darlington, Middlesbrough, and Stockton, besides a number of smaller towns and villages. In a tabular form Dr. BARRY sets out the number of attacks of enteric fever fortnight by fortnight from January to October, 1890, and whilst the fortnightly average from January to September 6th was about 35, there occurred in the fortnight ending September 20th no less than 243, and in the fortnight ending October 4th no less than 334 attacks—or 577 cases of enteric fever in four weeks. And taking certain towns, such as the three just named, it was further found that the distribution of the disease had been fairly uniform throughout their whole area. In the villages lying in the Tees Valley the same uniformity was not observed, the special incidence of the fever being confined to certain townships and localities, others escaping.

Seeking the cause for this sudden and widespread outburst of fever, Dr. BARRY found himself enabled to eliminate all ordinary conditions which are held to be capable of leading to enteric fever, except one, and this was the water service. The three towns named, with other places and villages in the Tees district, get their water through two bodies—namely, the Stockton and Middlesbrough Water Board and the Darlington Corporation, and both these bodies draw their supply from the Tees at nearly the same point in the river; and it is shown that, with one single exception, and this in the latter part of the four weeks referred to, the heavy incidence of the disease was practically limited to the areas so supplied.

In the Tees Valley district some 41,000 houses receive Tees river water, and they were invaded by enteric fever at the rate of 12 per 1000; in the same district are some 56,000 houses obtaining water from other sources, and these were invaded only at a rate amounting to rather less than 1 per 1000. So also in localities receiving no other supply than the Tees water the rate of attack on houses varied from 11·5 to 13 per 1000; and much higher rates of attack were observed in such portions only of localities which received this water, whereas other portions had a different supply. In short, the exceptional incidence of the disease was found to have been almost entirely confined to the users of the Tees water; and the suggestion that one cause only was the essential one at work is shown by the uniformity in the rate of incidence in the larger communities receiving Tees water only.

But how did the Tees water come to have the faculty of distributing disease? The answer to this reveals a state of affairs hardly to be credited. The drainage area of the Tees covers some three hundred square miles, and within this area the river receives, either directly or indirectly, the drainage of some fifteen to twenty villages, as well as that of the town of Barnard Castle and of many graveyards and farmsteads. Dr. BARRY'S report carries the reader up and down from Barnard Castle to the intakes of the two water-distributing bodies, telling in detail of the filth discharged into it, and of the filth deposited on the foreshore, which only awaits a sudden flush of water to be swept on towards the intakes. As to Barnard Castle, the sewage of some six thousand people, to say nothing of large bodies of summer visitors and the militia, has its outfall through a main sewer "directly into the Tees." Besides other local sources of contamination there are the contents of the waterclosets from nearly four hundred houses. We need not follow Dr. BARRY in all his details as to the pollution of the river. His conclusion, "that a considerable amount of excremental filth and house refuse is being continually poured into and conveyed down the river," can admit of no denial; and it seems equally clear that the pollution of the river must be enormously increased during periods of heavy rainfall, when the river is in flood. Having this latter point in view, he inquires next if, by reason of any exceptional circumstances, any wholesale discharge of sewage into the Tees could have taken place shortly before the prevalence of fever. It soon transpired that in the fortnight ending Aug. 23rd no less than 3·6 inches of rain fell, this being one of the heaviest records of rainfall known in the Tees Valley. This circumstance, too, came into play just when it should have done to allow of the period of incubation generally exhibited by enteric fever as an antecedent to the explosion beginning on Sept. 4th.

Enteric fever is rightly regarded as typical of the class of "filth diseases," and its occurrence is very commonly associated with the excremental pollution of potable water. In the instance under consideration we find that the people attacked are drinking a water habitually fouled by sewage and excreta, and that a special flush of filth was swept into the source whence the supply is derived just antecedent to a special outburst of disease.

But why, it may be asked, is not enteric fever more common in the Tees Valley, and why were only some 10 per 1000 of the households drinking this water attacked last autumn? We have abundant evidence that the contagium of enteric fever must be a particulate one, and that it is not uniformly distributed through such a vehicle as water in the same sense that any substance in solution would be. It also seems clear that the extent of risk to infection from water depends, in the case of this disease, in the number of opportunities which occur for receiving the particles of infection. In the case of the Tees, often a rapidly flowing river, the amount of risk may perhaps be roughly estimated by the average amount of enteric fever occurring amongst the inhabitants of the Tees Valley, although we would not presume that the river water is the only cause of that disease. On the other hand, the special risk, such as was incurred in a particular fortnight last year, may to some extent be measured by the tenfold increase in the amount of the disease which took place in September last. That much matter potent to produce enteric fever was washed past the intakes of the water companies during the rapid flush in August last must be obvious, and that a good deal of water free from the particulate infection could have been drawn up into the town must be equally obvious. Herein, doubtless, lies the answer to the questions put. But the danger remains, and must remain so long as the people in the Tees district are supplied with water from a stream charged with the excreta and sewage of their neighbours above.

WHATEVER may be said of total abstainers from alcohol, it can never be alleged truthfully against them that their peculiar habit interferes with their industry, their energy,

or their perseverance. When an aspiring member of Parliament is about to contest a district, one of the first things he considers is the strength of the teetotal element. If there be many teetotal organisations, he is sure from the first that he must reckon with them; they will have their own ideas, they are likely to combine in many ideas, and perfectly certain it is that, should they set to work, their physical powers will fully compensate for any shortcomings of an argumentative kind. They will be aggressive, patient, vigilant, and of long endurance. Last week there was an illustration of some of these faculties in those abstaining members of the profession of medicine who are the representatives of the British Medical Temperance Association, a medical body now numbering close upon five hundred, and, we believe, overnumbering that figure if they who are learning their "rudimans," as Dr. COPHAGUS called it, may be considered medical. This Society, like its fellows, meets ordinarily in its own central rooms in the west end of London, or in the central rooms of its branches in other parts of the kingdom, and there carries on its work of papers and discussions. But now, on the suggestion of its indefatigable honorary secretary, Dr. RIDGE, the members of the Society, with characteristic pertinacity, are moving into new pastures and holding meetings in different districts in order to invite the busy practitioners of the district visited to meet them in the most convenient way and discuss with them the great argument for and against alcohol. On Wednesday week last, Feb. 25th, the first meeting of this kind was held at Northampton House, St. Paul's-road, Highbury, and for numbers present, as well as for the matter of debate, it must be accepted as a most successful first attempt. Dr. B. W. RICHARDSON, the President of the Association, occupied the chair, and in an opening address led the way simply towards discussion. Every word that was extreme was avoided as unnecessary. The apathy of the profession as compared with the energy of the clergy was first touched upon, and then the sanitary side of the matter was made a special point for consideration. Alcohol produces a certain large and calculable mortality; the mortality means a large bill of sickness, and the sickness means an enormous loss of labour and the rewards of labour. But we as a profession of health, said the chairman, are the custodians of health, and ought, therefore, specially to concern ourselves in the wholesale removal of the preventable cause of so much disease and misery. If an epidemic from some more obscure cause destroyed a tithe of people so systematically and regularly as alcohol does, we should be ambitious to vie with each other in discovering the mode of reaching and removing the root of the evil. It is our duty to do the same thing in regard to this great plague which is always before our eyes. Another point dwelt on was the recognisable pathology of alcohol, and the lesson it supplies, in respect to the employment of it as a medicinal remedy. Touching this last subject, the speaker repeated his often stated opinion that alcohol, whenever it is prescribed in disease, should be prescribed as "a weapon of precision"—that is to say, diluted with water in measured doses, without the least complication. This plan, he urged, answers perfectly, and after fifteen years' employment of it he had found it equal to every requirement. Finally, the requirement itself was, he thought, in truth, very much curtailed when all the facts of the necessity were fully disclosed. The masters of physic who recognised the force of the *experientia fallax* were most sound when they exposed that kind of experience, and never more was that soundness verified than in the practice of alcohol administration. Let a practitioner, said the speaker, who has been accustomed to use alcohol once have the courage to look at the other side of the shield, and see what remarkable results follow treatment without it—as, for example, in cases of hæmorrhage, pneumonia, and asthenia, and the rapidity with which the mode of treatment without alcohol would advance would lead to quite a revolution in the practice of using alcohol as a remedial instrument. Dr. RIDGE, Dr. NORMAN KERR, and Mr. MOIR followed on the same side. The most trenchant opponent was Dr. KING, who dwelt more particularly on the social influence of alcohol for good when perfect moderation tempered appetite. He was of opinion that wine judiciously taken aided the worker and sustained the enfeebled. Altogether, this new experiment of local discussion on the alcohol topic from its medical aspects, by medical men amongst themselves, was so friendly, hopeful, and instructive that we trust it will be repeated. It is good for brethren to dwell together in unity.

THE Report of the Hospital Reform Inquiry Committee of Birmingham has recently been published[1], and should be procured and read by all who are interested in the great and urgent question of Hospital Reform. Our Birmingham correspondent gave last week a summary of its principal points. It is to be presented on the 9th instant to an adjourned conference of representatives of the medical charities of Birmingham and other organisations allied to them, and of representatives of the medical profession as convened by the Mayor of Birmingham in January of 1890. The chairman of the committee was his Honour Judge CHALMERS (of the County Court). Three members represented the medical profession, two the General Hospital, one the Queen's Hospital, two the General Dispensary, one the Hospital Saturday Committee, one the Children's Hospital, the Eye Hospital, and the Women's Hospital collectively.

It may be remembered that medical men are largely responsible for the initiation of this inquiry. In November, 1889, the profession in Birmingham met to consider a report on the question by a committee of medical men, prepared in October of that year, and passed resolutions suggesting a conference of all parties interested. The conference was held, and recommended a committee the constitution of which should be left to the Mayor, and was composed as we have described above. It is gratifying to think that the medical profession has been so honourably associated with this inquiry. Of the seventeen witnesses examined nine were members of the profession. They were, of course, in a minority on the committee. But it will be seen from the report that the results of inquiry and the remedies suggested accord closely with the views long held by the medical profession. The report is an admirable one in its arrangement, in its lucidity, and in its brevity. It does not include a copy of the evidence taken, but we may

[1] Messrs. Osborne and Son, New-street, Birmingham.

hope that this will be published in a separate form. The general result of the inquiry is to show that there is an enormous abuse of hospital charity in the out-patient department of hospitals by the almost reckless admission of all comers. In some hospitals there is no pretence of inquiry; in others, and almost in all, it is formal and ineffective. The result, of course, is that the people prefer the gratuitous advice of consulting and hospital physicians and surgeons to paying, however reasonably, for the services of the ordinary practitioners. They would undoubtedly prefer to get their food and other necessaries of life on the same terms. Under this demoralising system the out-patients of hospitals in Birmingham have advanced in twenty years—1867 as compared with 1887—from 67,000 to 166,000. The evils of this monstrous excrescence of charity are well pointed out: unfair pressure on the hospital staff; hurried examination of patients; and the long detention of those who are seriously ill. The framers of the report seem appalled at this rapid growth. They become prophetic, and say if it is not stopped an utter breakdown of the present arrangements must be the result. This is what we have long prognosticated. The benevolent will give any reasonable amount for the relief of really urgent cases, but for those who can insure themselves against sickness, in the clubs of private practitioners or in provident dispensary or sick funds, they will not subscribe, and are already becoming critical.

The main conclusions of the Committee are to recommend: 1. The formation of a general Council to secure common and joint action of all hospitals and dispensaries. 2. The formation of an inquiry agency to investigate the circumstances of patients. 3. The exclusion of all but serious cases, and of all who can either pay or who could more properly be dealt with by the Poor Law. 4. Provision for cases so excluded in dispensaries or provident associations. 5. The admission to the out-patient department of any person recommended by a provident association or a qualified medical practitioner.

These are admirable suggestions. Only one thing remains—to carry them into practice. It must be remembered that the gratuitous treatment in hospitals of those who can pay is only one shade less demoralising than downright pauperism. We shall look anxiously for the continued action of the profession in assisting the Mayor and other leading men of Birmingham in this great reform. We must be practical. We must give help to social reformers. It will be another feather in the cap of Birmingham if, even before the Lords' Committee shall have time to report, it shall have shown the way of effective reform of the hospital out-patient system.

Annotations.

"Ne quid nimis."

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SINCE our last issue the Councils of University and King's Colleges have held special meetings for the consideration of the latest "revised scheme" of the University of London. As was anticipated, neither body has accepted it. The Council of University College passed a resolution to send a letter to the Senate (1) "Recognising that in the course of the discussion of successive draft schemes the views on behalf of the London Colleges on some important points have been fairly met, but at the same time regretting that in the revised scheme there are other important points which in their present form are not satisfactory to the Council." We understand that a stronger resolution was only defeated by the narrowest majority, so that the new scheme meets with little favour at University College. The resolution passed by the Council of King's College was more pronounced in its opposition, and was carried with scarcely a dissentient voice: (1) "Recognising that in the course of the discussion of successive draft schemes the views urged on behalf of the London Colleges on some important points have been carefully considered; but the Council regret that in the revised scheme submitted to them changes have been introduced which are inconsistent with an important principle laid down by the Royal Commission, and which render the scheme materially different from that to which the Council assented last July." The July scheme made some provision towards a local university or its equivalent in London; the latest scheme, by engrafting on it the recognition of provincial colleges as constituent colleges, and by enlarging the Senate to carry out this new work, has altered materially the position of the London Teaching Colleges, and these could hardly be expected to agree to a new scheme in which they were placed at a relative disadvantage, and which was in direct opposition to the recommendation of the Royal Commission. The divergence of views on educational questions to be expected on such a large Senate was emphasised by a proposition placed before it on Jan. 28th, to enlarge its proposed number of fifty-two still further by adding ten more non-collegiate members. The other resolutions, which were passed in identical terms at both Colleges, would seem to intimate that conferences with the Senate of the University were at an end, and that they were anxious to refer the question at once to Lord Cranbrook. In this manner a solution of the problems will possibly be most readily found. "(2) Expressing the opinion that on these it will probably be best that the views of the University and of the Colleges should be heard by the Lord President or the Privy Council; (3) and reserving full liberty to the Council to express to the Lord President or the Privy Council their objections to any features of the Scheme which may remain in a form unsatisfactory to the Council, or may fail to secure for London the advantages of a Teaching University." A memorandum published this week by the Senate of the University of London is most interesting in relation to medical degrees. It is distinctly stated that "no alteration is now made in the degree of M.D." In regard to the M.B. pass degree arrangements are suggested which will, while keeping the preliminary scientific M.B. examination under its own Standing Committee in Medicine, transfer all the other subjects for the pass degree to the supervision of a joint committee of the Senate and the Royal Colleges. This arrangement is, strangely enough, described as one "which will not lower the standard or lessen the value of the medical degrees of the University, or impair their scientific character." If this means that the examinations to be controlled by the newly suggested Board are to be kept at the existing standard, then the boon of medical degrees to London students on reasonable terms will be as far off as ever; if such conditions are granted under these new arrangements, how is the standard—declared by the Royal Commission to be an Honours one—to be maintained at its present level? The two positions are clearly incompatible.

THE MAIN DRAINAGE OF LONDON.

THE immediate necessities of London in respect of main drainage have been placed before the London County Council in a carefully prepared report by Sir Benjamin Baker and Mr. A. R. Binnie, the chief engineer of the Council. These necessities are twofold. The one, the provision of sufficient sewers for the effectual drainage of the metropolitan area; the other, the proper treatment of the sewage before its final discharge. London north of the Thames is provided with three main sewers—the high level draining Hampstead, Kentish Town, and Hackney, and being joined at Old Ford by the middle level sewer, which runs nearly in a straight line to this point from Bayswater; while the northern low level sewer extends from Pimlico to Abbey Mills, where the sewage from the northern part of London is raised by pumping into the northern outfall sewer, to be discharged at Barking. The southern part of London is drained by two main sewers, the high and low level, joined by the Effra branch, eventually discharging, after pumping, at Crossness. The insufficiency of these sewers has long been recognised, and the floodings of the low-lying parts of London, especially in times of heavy rainfall, have been frequently the subject of public comment. There has been, therefore, much necessity for this insufficiency to be considered by competent engineers, and for the necessary steps to be taken to make provision which will relieve these districts from the disadvantage from which they suffer. The proper method of dealing with the sewage, whether by chemical treatment or by irrigation, has been matter of so much investigation that it cannot be expected any further light will be thrown upon it for some time to come. At the present time the arrangements for chemical treatment are incomplete, and particularly at Crossness, where the necessary works for precipitation are in progress; but the experience gained at Barking warrants a more hopeful view of this method than might have been anticipated. No one, therefore, with any sense of responsibility would be prepared to recommend a new departure until it was known that there was necessity for further change. This is evidently the outcome of the inquiry, the details of which we propose to discuss shortly.

THE INFLUENZA OF 1890 AND A DEPRESSED TONE OF HUMAN VITALITY.

IN our Edinburgh correspondent's notes last week some interesting extracts were given from the report submitted by Dr. Clouston upon the Royal Edinburgh Asylum for the past year. They had reference more especially to some evidence produced by Dr. Clouston as to the existence of an exceptionally low tone of human vitality during the year 1890 in relation to the epidemic of influenza. Whether it was the influenza in the early part of the year that had perceptibly lowered human vitality, or whether the prevalence of the influenza merely showed that European humanity was in a lowered state of vitality, so being a fit nidus for the influenza germs to propagate in, or whether it was the sunless, summerless general character of the year, Dr. Clouston could not say. He distinctly connected, however, the influenza in some way with the unprecedented number of melancholic patients sent to Morningside Asylum. He goes on to say, and we think with truth, that he believes the epidemic of influenza left the European world's nerves and spirits in a far worse state than it found them, and that they scarcely yet had recovered their normal tone. Many others have expressed themselves in the same sense, and we look upon the subject as one of deep interest. An excellent opportunity will be given to asylum superintendents at this season of preparation of their annual reports to confirm or otherwise this expression of opinion on the part of Dr. Clouston. With regard to the vexed question of the alleged increase of insanity, Dr. Clouston stated that the number of rate-paid admissions into the Edinburgh Asylum did not tend to bear out the popular ideas as to the rapid increase of mental diseases in recent years, for the yearly production of pauper lunacy in the district had scarcely risen appreciably during the past fifteen years. The production of pauper insanity was with them not keeping pace with the growth of the population. The cases of melancholia admitted during the year were in excess of those of mania, and this was quite an unprecedented experience, as during the past five years the cases of mania exceeded those of melancholia by 37 per cent. The relationship existing between insanity and other diseases and epidemics, on the one hand, and with disturbing social influences of a general character on the other, is yet far from being worked out, and we welcome such observations as those of Dr. Clouston as being not only interesting and instructive in themselves, but as suggestive and useful to other workers in this complicated region of scientific thought and medical experience.

THE MIDWIVES' REGISTRATION BILL.

WE are glad to be able to give a report of the proceedings of a deputation on the Registration of Midwives' Bill to the Lord President. The Lord President's answer is important, and shows that he is considering the subject carefully. He takes for granted that there is an almost universal desire to improve the education of midwives so far as that can be done by legislation. We are not the less satisfied with Lord Cranbrook's position that he sees clearly the difficulties to be overcome. He is a very likely man to overcome them. There seems no prospect of legislation this year, so that plenty of opportunity will be given for the consideration and removal of all reasonable objections.

THE CANTHARIDIN TREATMENT OF TUBERCULOSIS.

WE may refer those who are interested in the newly found substitute for Koch's liquid to the pages of our esteemed contemporary, the *Berliner Klinische Wochenschrift*, which devotes many pages to the textual report of the proceedings of the Berlin Medical Society on the 25th ult., when Dr. Oscar Liebreich discussed the pharmacological and therapeutical properties of salts of cantharidinic acid. Drs. Paul Heymann, G. Guttmann, and B. Fraenkel related cases in proof of the efficacy of the minimal doses (averaging two decimilligrammes) of the drug used as subcutaneous injections in cases of tubercular disease. The evidence adduced by these experienced observers is all the more valuable since they have been for the past few months carefully following up the results of Koch's injections, in cases of laryngeal phthisis particularly. The local changes and the general improvement ensuing upon the cantharidin injections appear, in the few cases that have been so far treated, to have been very marked, and, what is more to the point, to have been unattended by any of the drawbacks with which the use of "tuberculin" is so often associated. Unless the "enthusiasm" has outrun even that which was displayed in the early days of Koch's remedy—and we can hardly suppose that the lesson then taught has been given in vain,—it does really seem as if Dr. Liebreich's pharmacological speculations are likely to be fruitful in many ways. We may remind our readers that he selected this substance because of its known remarkable property of exciting exudation from the capillaries. That property, which is patent to all when the skin is subjected to the action of a blister, is doubtless likewise exerted upon internal organs, notably the kidneys and sexual organs, when cantharides is taken internally. Nay, it has been found to produce pulmonary œdema, and Dr. Liebreich said that he had

found it recommended (in English literature too) in certain pulmonary diseases. He reasoned then that, since it has some selective property—e.g., a much greater affinity for the renal glomerular capillaries than for the vessels in other parts — it was not unlikely that, in the case of capillaries in a morbidly irritable state, its effects might be exerted by doses quite inadequate to excite transudation in the normal body. As to its applicability to tubercle, he ventured on the further surmise that its action might be an indirectly specific one, since the researches of Buchner and Stern have shown that blood serum has a bactericidal action. Commencing with the greatest caution, and finding that a dose of six decimilligrammes excited hæmaturia in one case, he recommended that no more than one or two decimilligrammes of cantharidin in alkaline solution (one cubic centimetre of which contained two decimilligrammes) should be injected, and that an interval of one day might elapse between the injections. Renal disease is of course a contraindication. Strangury, hæmaturia, and other symptoms were observed by Dr. Heymann in some of his cases, symptoms which soon disappeared on suspending the injections for a short time. It is clear that in Berlin professional interest will be centred for some time upon the relative value of "tuberculin" and "cantharidin" in tuberculosis.

BURIAL REFORM AND THE STATE OF ST. ASAPH CHURCHYARD.

IN spite of all that has been done in the cause of burial reform cases crop up now and then which show how much still remains to be done. An instance has occurred lately. Dr. Hoffman, the medical officer of the Burial Acts Department of the Home Office, has been holding an inquiry into the insanitary condition of St. Asaph Churchyard, which has been in use for four centuries, and is so crowded that new graves cannot be dug without bringing up the contents of old ones, while human bones are to be seen frequently strewn on the surface. Dr. Hoffman inspected the churchyard in company with Dr. Lloyd Roberts, the medical officer of health, who informed him that owing to the impregnated condition of the soil it was dangerous to health. Dr. Hoffmann intimated that he should recommend increased restrictions, limiting burial to existing vaults and walled graves, and to earth graves for widows and widowers of those already interred there. It is, however, greatly to be hoped that public opinion and the good sense of the St. Asaph citizens will effect even a greater reform, and close entirely this already too full churchyard. The Church Congress will meet this year at Rhyl, under the presidency of the Bishop of St. Asaph. We trust that burial reform will receive the early attention of the "subjects committee." Welsh people have always been very conspicuous for their conservatism of language and of ancient traditions. Their churchyards have been condemned before in no measured anguage, and the description just given of St. Asaph churchyard is one which could hardly have been expected so near to the close of the nineteenth century.

CAPACITY OF THE SPINAL CANAL.

THE results of certain experiments undertaken by Professor Reid and Dr. Sherrington, with a view to determining the result of position on the capacity of the spinal canal, are related in the last number of *Brain*. The plan of experiment was as follows. After trepanning over the vertex close to the longitudinal sinus, the dura mater was removed to an extent corresponding with the trepan hole. Water was then poured into the subdural space until it filled it, and a glass tube was next secured in the hole in a perfectly watertight fashion, a thin membrane which floated on the water filling the subdural space having been previously drawn over the end of the tube. A piece of glass tubing was connected with the other tube by flexible watertight joints, the farther end of this tube being on a level with the trepan hole in the skull. Finally, this tube and its connexions were filled with water and its free end projected over the scale pan of a sensitive balance, the other arm of which had a recording apparatus marking a revolving cylinder attached to it. The cadaver was suspended by means of an iron coronet, and variations in position were produced with the aid of a horizontal bar from the vertical stand on which the body was hung. The conclusions arrived at are that the capacity of the cranio-vertebral canal is at its maximum when the body is hanging freely and vertically, that there is diminution in this capacity when the weight of the trunk and limbs is taken off, and also when the vertebral column is bent backward or forward. In other words, it is found by this method of investigation that the alterations in the curvatures of the spinal canal by various movements do influence the capacity of the canal, but not to any great extent. This variation is found to be greater in the child than in the adult. The authors conclude by remarking that this increase is so small that it becomes difficult to conceive how in the suspension treatment for cases of tabes there can, as has sometimes been claimed, be any actual stretching of the spinal cord.

MILITARY MEDICINE IN ARGENTINA.

WE have received the first number of the *Boletin de Sanidad Militar*, a monthly journal dealing with subjects of interest to the naval and military medical services of the Argentine Republic, and edited by the inspectors-general of each service and a number of other officers. A good deal of space is devoted to Koch's treatment in Europe, the observations which were being made in Buenos Ayres being in too incomplete a state to warrant any report. Dr. Cabezo contributes an article on first dressings, in which he does not give any information as to what were used in the Paraguay and Entre-Rios campaigns, though he mentions these operations as showing the great importance of efficient field dressings. A description of a simple apparatus for estimating the carbonic acid in the air is contributed by Señor Bosque y Reyes, pharmacist, and a complete list of the military and naval, medical, and pharmaceutical officers is appended.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE presidential address of Mr. Timothy Holmes at the annual meeting of the Royal Medical and Chirurgical Society was full of satisfaction with the present position of the Society and of hope for its future. The Society has embarked on a considerable financial undertaking, but there is reason to believe that it is fully equal to its responsibilities, although during the past year it has had to curtail considerably its outlay on the library. Still, those who are best acquainted with its position are confident that it will be able to keep up its invaluable library on a scale equal to all requirements. Mr. Holmes, whilst omitting the full biographical details of deceased Fellows, intimated, however, that he had prepared these for publication, and his brief references to the departed were marked by good feeling and judgment. We would suggest that the compilation of full obituary notices—which certainly should be retained—might be entrusted to personal friends of the deceased Fellows, and that they might form an appendix to the published address by the President. Mr. Holmes referred to the idea initiated thirty years ago, and more than once revived (the last occasion, we believe, being in Mr. Erichsen's presidency), of the combination of the leading

medical societies of the metropolis into one Academy of Medicine, but he did not think the time yet ripe for the initiation of such a scheme; whilst Mr. T. Smith, when seconding the vote of thanks to the President for his address, was wholly opposed to it. Mr. Holmes alluded to the increased facilities to be offered to country Fellows; and amongst other suggestions he made one which was received with some favour. It was that an attempt should be made to cultivate the social side of the Society by having *réunions* of a less formal character than the ordinary meetings. Another matter on which the Society is to be congratulated is the foundation of a permanent endowment fund, initiated last year by Sir R. Quain, and augmented by benefactions from other gentlemen. The utility of such a fund is unquestionable, and it affords an admirable opportunity for the Fellows to prove their practical interest in and attachment to the aims and objects of the Society.

HYSTERICAL DEAFNESS.

A CASE of so-called hysterical deafness is related by Dr. Würdemann in the *Philadelphia Medical News*. It occurred in a girl whose age is not given, and who was the subject of interstitial keratitis and middle ear disease. The hysterical symptoms consisted in inability to hear and understand what was said by members of her own family, with retained ability to hear what was said by others, and the abolition of perosseous conduction of the tuning-fork sound, although she was able to hear it through the ear. There were areas of anæsthesia about the ear, and sensibility on her hands, feet, and knees seems to have been lessened, although the patient's stupidity was great, rendering the examination unsatisfactory. Vigorous treatment by galvanism, blistering, and hot baths was used with good effect. The hearing improved, but the areas of diminished sensibility persisted on both sides.

DIPHTHERIA AND ITS CAUSATION IN SALFORD.

SALFORD is one of the large towns in England which has within recent years exhibited a large increase in diphtheria, and the subject has been dealt with in an exhaustive report by Mr. Charles Paget, the medical officer of health for the borough. During the five years 1883–87 the mean annual number of notified attacks from diphtheria was 72; in 1888 the numbers rose to 176; and in the next two years they reached 691 and 694 respectively. The increase in the incidence of diphtheria commenced before Mr. Paget's tenure of office; and, apart from this, there are obviously great difficulties in tracing the beginnings of such a disease as this three years after its commencing prevalence. Indeed, it is admitted that the origin of the epidemic cannot now be determined; but there is a strong presumption that there was a considerable prevalence, in the last quarter of 1887, of that form of sore-throat which goes unnotified, but which has some definite connexion with diphtheria prevalences. With regard to origin, Mr. Paget further states that he is able to exclude both milk and disease among domestic animals from any obvious share in the occurrence; but he is convinced that the elementary schools tended largely to the distribution of the malady, and this mainly by means of the aggregation of children suffering from the mild attacks of so-called "sore-throat" already referred to. Much pains were evidently devoted to ascertaining whether, and if so how far, soil pollution could have had any influence on the disease, and a special effort was made to ascertain how far "tips" and the erection of buildings on soil polluted by accumulations of refuse had a share in localising the prevalence. In the end Mr, Paget is obliged to come to the conclusion that between such conditions and the diphtheria in Salford no direct connexion could be made out. Still, he by no means exonerates the midden privy system and the practice of levelling up building land with refuse containing organic matter from a share in aggravating the circumstances of the epidemic and from enhancing the virulence of the infection in regard of individual attacks in persons exposed to such influences. The general effect of such influences in lowering vitality can hardly fail to be operative for evil, in the sense indicated, in the case of such a disease as diphtheria. All clue to a direct infection seems, however, to have been overwhelmed in the one prevailing circumstance that, whether at school or elsewhere, there was ample room for the operation of direct personal infection from person to person. But a predisposing cause beyond that already suggested is believed to have existed in the condition of the drains and sewers, and this especially where these admitted of the retention in them of offensive and infectious matters. By this latter statement we assume that Mr. Paget is inclined to regard sewers and drains as capable of acting directly by giving out the diphtheria contagium which has been received into them. The point is one of considerable interest; it is one as to which it is impossible to speak with certainty, and this especially where personal infection by means of unrecognised, as well as by recognised attacks, was so widely in operation. One thing is certain—namely, that immense pains have been devoted by Mr. Paget to the inquiry, and to the preparation of the well-illustrated report which he has submitted. If he and others before him have failed in clearing up the obscurities attaching to the causation of diphtheria, we may well concur with him that mere local investigations can no longer be expected to solve the difficulty, and that "the necessity for an exhaustive inquiry as to the origin and maintenance of diphtheria in this country" is growing daily, and has "already become a matter of national concern."

THE VIRCHOW TESTIMONIAL FUND.

AN official letter has been received by the honorary secretaries to the above fund from the German Committee, in which the latter express their pleasure at seeing the thoroughly representative character of the British Committee and their warmest thanks for the readiness with which the British profession are responding to the invitation to do honour to the great pathologist. They further inform the honorary secretaries that it is the intention of the German Committee to present, as far as means will permit, replicas of the medal which is to be struck in Virchow's honour to some of the representative British institutions. Finally, they state in reply to a question raised by several British admirers of Virchow, who wish to possess a lasting memento of his jubilee, that the artist to whom the execution of the large medal will be confided will also produce a replica on a smaller scale, which may be purchased from him. Particulars on this point will be given in due time.

THE SERUM OF GOATS' BLOOD IN PHTHISIS.

DR. LÉPINE of Lyons, who, starting from the fact that goats are refractory to phthisis, has been experimenting on patients by injecting goats' blood or its serum subcutaneously for some little time past, has just described in *La Semaine Médicale* the method which his experience has taught him is the best to employ. He finds that subcutaneous injections of serum cause so large a surface to become painful that it is impossible to repeat such injections frequently. When, however, they are intravenous, they may be repeated every two or three days, 80 or 100 cubic centimetres being introduced each time. There is, too, practically no danger, and

scarcely any pain, if the serum and all the apparatus are properly sterilised, and if the operation is conducted slowly. A goat in good condition will give 400 grammes of blood. This is drawn through a cannula inserted into the jugular vein, and is caught in a vessel half immersed in cold water. It is defibrinated, filtered through sterilised muslin, and then put into tubes attached to the circumference of a revolving disc, which is made to revolve by steam power 2000 times per minute for about forty minutes; after which, the separation of the corpuscles from the serum being complete, the latter is transferred to a sterilised vessel provided with an indiarubber tube issuing from the bottom and closed above with cotton-wool. The patient's arm having been disinfected and tied as for phlebotomy, a prominent vein is selected, and a very fine silver trocar inserted without dissection, which is by no means a difficult operation. This is cautiously connected with the indiarubber tube and the serum allowed to flow into the vein very slowly. If the patient should feel malaise, the flow must be stopped by lowering the reservoir. The highest amount that Dr. Lépine has transfused at one sitting has been 100 cubic centimetres. When the blood itself was transfused not more than 40 grammes could be borne, the patients complaining—for some not very evident reason—of extreme pain in the loins. Dr. Lépine does not as yet profess to be able to say how far this method of treating diseases by injecting blood or serum from an animal refractory to such diseases is likely to be successful; but it is, he considers, a promising idea, and he thinks it has the best chance of succeeding if the serum only is used, as the corpuscles appear to him, if anything, to hinder the good effect.

A NEW SUBSTITUTE FOR SANTONINE.

ACCORDING to Dr. Coppola santonine is not a true vermicide, its action on threadworms being that of a convulsant only, causing movements very similar to those due to epilepsy. In this state the worms are unable to coördinate their movements, and are easily expelled from the intestine by a purgative. Santonine also labours under other disadvantages; it is very easily absorbed by the mucous membrane of the gut, and it sometimes produces toxic effects. A much better vermicide is to be found in a compound of santonine, santoninoxyme, which he has recently prepared. This actually kills the worms, and is well borne in much larger doses than can be given of santonine. The best plan is to give for two or three days three times as large a quantity as is ordinarily prescribed of santonine, each dose being followed by a purgative.

THE SPREAD OF SANITATION.

THE amount of good which may result from a diffusion of a knowledge of the simplest sanitary laws has long been recognised. The difficulty is that, in spite of legislation and inspection, little can be done unless these are aided by individual appreciation and intelligent coöperation. In many places lectures upon the laws of health have been delivered with the view of rousing interest and supplying useful facts. But the lecture, when addressed to the relatively uneducated classes, stands a poor chance of doing lasting good. If notes are taken, they are frequently confused, and more frequently still they are incorrect. Almost a special training is necessary for the task of judiciously selecting the wheat from the chaff, which so often forms a large part of a popular lecture. To overcome this difficulty the Manchester health lectures for the people have been for some time past most usefully supplemented by their publication in cheap form, but in addition to these the Manchester and Salford Sanitary Association has recently issued a series of tracts prepared for distribution at a merely nominal price (2s. per 100). These touch upon a great variety of topics connected with health—e.g., the care of children, the prevention of blindness in infancy, school attendance and infectious disease, how to avoid scarlet fever and to prevent its spread, the influence of alcohol upon the system, &c., while in one tract we find grouped most usefully together the early symptoms of the commoner infectious diseases of childhood. These tracts are in simple, straightforward language, and should go far to accomplish the end in view.

THE SHELTON-STREET IMPROVEMENT SCHEME.

THE St. Giles's Board of Works are endeavouring to prevent confirmation by Parliament of the provisional order relating to the Shelton-street scheme. The main objection of the Board is to the proposal of the London County Council to erect a model common lodging-house upon the vacant land. The London County Council inherited from the Metropolitan Board of Works an unfortunate legacy. The scheme, it will be recollected, was forced upon the Board by the St. Giles's authorities, and the Board neglected to acquire sufficient of the trade premises with which the area was interspersed to enable it to be dealt with in a satisfactory manner. The Council's difficulties are therefore considerable, and it may be anticipated that when the subject is discussed in the House of Commons a satisfactory answer will be given to the objection of the St. Giles's authority. One of the allegations of the St. Giles's Board is that the vacant land is not sufficiently devoted to the provision of artisans' dwellings, which it is stated are much needed in that neighbourhood. The area is, however, not well adapted for buildings of this kind, and, indeed, it is not obvious how the Council would meet their statutory obligation to rehouse one half the number of inhabitants displaced by the clearance were they to adopt any other course. No doubt the proposal to erect a common lodging-house will not be looked upon with favour in the district, especially by the owners of buildings of a similar kind, who may fear that the accommodation which they provide will be in less demand than that of the London County Council. There is not much probability that the House of Commons, when all the circumstances of the case are explained, will refuse to endorse the decision of the Home Secretary. The chief lesson to be learnt from what has taken place is that it is false economy to carry out an improvement scheme in any but a liberal manner.

BACTERIA PROTEINS AND THEIR RELATION TO INFLAMMATION AND PUS FORMATION.

DR. H. BUCHNER gave last year three lectures on the relation of bacteria proteins to the inflammatory and pyogenic process, in which he said that it is generally supposed the proximate chemical cause of inflammation and formation of pus is the presence of decomposing substances, the chemical produce of bacterial cells; but that ptomaines and toxins, and even toxalbumens, are pre-eminently nerve poisons, and in only a few of them, as in cadaverin and putrescin, can a pyogenic effect be traced as well. These substances do not, therefore, explain the inflammatory and pyrexial character of most infectious processes, including suppuration, especially as Lange and Roemer have proved by their experiments that no decomposing substances have any considerable affinity for leucocytes. Substances having such affinity, however, do exist, according to the author, and he has already referred to them in a previous publication. They are parts of the bacillary body, that is, of its plasma—namely, the so called bacteria proteins, which Nencki had already studied in 1880 without imagining their

great pathological importance. Dr. Buchner has shown by his experiments that bacteria proteins have the strongest affinity for leucocytes, and that in man they also have an intensely inflammatory effect. A hypodermic injection of a few milligrammes of the protein of bacillus pyocyaneus caused an inflammation which, though non-infectious and free from bacilli, and almost deserving the name of chemical inflammation, presented all the clinical symptoms of erysipelas with lymphangitis; the course of this inflammation is, however, more rapid and more benign, and the general state of health is little disturbed. The author considers that the proteins can exercise their activity only when they have been secreted from the bacterial cell, and that this secretion takes place exclusively when the cell is in "involution"—that is, dying, or at any rate morbidly affected. This also explains why in anthrax of rodents, when virulent bacilli are indefinitely increased in the blood and never die, there is no sign of inflammatory leucocytosis, while a hypodermic injection of very weak or even completely sterilised anthrax culture has a strong pyogenic effect in the same rodents. Of seven different bacilli which the author has been able to experiment upon the proteins of the typhus bacillus seem particularly effective. It is very easy to obtain the protein of Friedländer's pneumonia bacillus, and still more so that of the bacillus pyocyaneus. The protein has the same chemical reaction as all albuminoids, and most nearly approaches in that respect vegetable caseins. The author subsequently experimented on vegetable caseins, especially on the gluten casein of wheat, and the result was remarkably similar to that of experiments with bacilli.

THE HOUSING OF THE WORKING CLASSES.

THE Paddington Vestry, not satisfied with the results of the conference held at the offices of the London County Council on the Housing of the Working Classes Act, invited to a Conference at the Paddington Vestry Hall representatives of those local authorities who were prepared to further discuss the matter, and the first meeting was held on Feb. 20th. This conference endorsed the resolution passed at the County Hall, that the Council should contribute one moiety of the expenses of carrying into effect all schemes comprising an area of five dwelling-houses and upwards, and appointed a committee to further define the conditions which constitute a house so dangerous or injurious to health as to be unfit for human habitation. Certain suggestions on this point were referred to this committee for consideration. We have already expressed the opinion that every house must be taken on its own merits, and that it is impossible to define what is really a question of degree, and we fail to see that the suggestions are any material advance upon the report of the medical officers of health presented to the meeting at Spring-gardens. Other proposals were also referred to the committee which enter into more detail, and among them we note one to the effect that a house is to be deemed so dangerous or injurious to health as to be unfit for human habitation if it be without a dustbin.

TRIGEMINAL NEURALGIA.

IN the *Medical News*, Professor Andrews of Chicago draws attention to a means of relief afforded in those distressing cases where there is a recurrence of the pain after resection of the nerve. A patient of his, on whom he had operated by removing a portion of the inferior division of the nerve, returned after eighteen months again suffering from pain, and begging for an operation. He incised the old cicatrix, and, judging that the end of the nerve was probably attached to the cicatricial tissue, he got hold of that as deep down as he could, and forcibly drew upon it and twisted it until it came away. Although no nervous tissue was discovered in the removed matter, there is no doubt that even if no part of the stump of the nerve was removed very considerable traction was exerted upon it, and to this nerve-stretching the author is inclined to ascribe the relief from pain which followed the operation. This, no doubt, in part at least, explains the result, but it is also in some degree to be ascribed probably to freeing the stump of the nerve from the cicatricial tissue in which it had become involved.

THE PATHOLOGY AND SURGERY OF THE APPENDIX CÆCI.

ALTHOUGH the Clinical Society departed from its usual course and devoted its meeting on Friday last to an adjourned discussion on the above subject, yet it must have been felt at its close that the question had been by no means exhausted. It is one that has of late years come prominently to the front—one, too, in which both physicians and surgeons have an interest. It deals, moreover, with a class of disease of singular frequency, and of varying fatality. To discuss it adequately would require a debate much more prolonged than that which has just been assigned to it. We will therefore content ourselves here with noting some of the points raised in the course of that discussion. In the first place is to be remarked the want of unanimity upon the true nature of so-called typhlitis—a term which is, in the opinion of some, misapplied to the larger proportion of cases that are at present included under it. Although Mr. Treves has apparently gone back from his former belief as to the frequency with which the appendix shares in the production of the symptoms of typhlitis, and although, as Mr. Pearce Gould showed, the diagnosis of "appendicitis" had in some quarters been often very erroneously made, still there is no question that the pathological evidence of an independent inflammation of the body of the cæcum is as rare as the verification of an inflamed and ulcerated appendix in cases of "typhlitis" is common. Drs. Coupland and Kingston Fowler expressed this view strongly, the latter dealing with definite post-mortem facts. Mr. Treves laid some stress upon the palpation of an enlarged appendix through the rectum as serving to distinguish the cases; but he did not state whether this plan had been adopted in the ordinary cases, which recover under the guiding principles of "rest"; and it is certain that "relapsing" cases form no very large proportion of all those in which there is appendix mischief, nor, indeed, that there is more danger in a relapse than in a primary attack. On the whole it will conduce to lucidity if we regard the appendix as the seat of the trouble in all classes of cases—those which resolve and those which lead to more or less extensive perityphlitic suppuration. Mr. Bland Sutton's comparison of the appendix to the tonsil was suggestive, but hardly essential to the argument. For although, as he showed, this structure is richly provided with lymphatic tissue, yet it is by no means certain that its inflammatory lesions are primarily evolved and not excited by fæcal or other impacted contents. As to the results of inflammation and ulceration of this structure, the cases may be grouped under the following heads:—1. Cases where perforation occurs suddenly leading to general peritonitis. 2. Cases where the surrounding inflammation is limited, owing to the formation of adhesions. This class may be further subdivided into (*a*) those where there is resolution of the inflamed products, with or without a liability to relapse;

and (*b*) those where suppuration takes place, the ultimate issue being uncertain, the pus sometimes burrowing into the tissues outside the peritoneum in various directions, sometimes being more or less confined within a peritoneal abscess, the existence of which is a constant element of danger to life. There can be no hesitation as to the propriety of surgical intervention in these latter cases; but the fact that the progress of the suppurative inflammation is often very insidious emphasises the need for a prompt recourse to surgery whenever possible. A highly interesting point was raised by Mr. Pearce Gould—namely, whether the diseased appendix should be removed or not. He advocated the latter course, trusting to free incision and drainage, and he was supported by Mr. Charters Symonds; whilst Mr. Sutton, in his able reply, contended that this would hardly be an advance upon the old practice, and that it would be wrong to leave behind the source of irritation. The final decision in this matter must be left to the teachings of experience. One thing at any rate may be hoped for as the result of this debate, and that is a prompter resort to surgical interference when the indications point to extension of the inflammatory process to the general peritoneum or the supervention of suppuration.

THE LATE MR. JOHN MARSHALL.

WE would call the particular attention of those among our readers who were friends, pupils, or admirers of the late Professor Marshall to a letter which appears in another column inviting subscriptions to a fund which is being raised to establish a memorial to him in the shape of a bust and prize in connexion with University College, London. While it is becoming that the memorial should be attached to the institution with which Professor Marshall was himself so intimately associated for half a century, it should not be forgotten that the influence of his thought and activities extended over a wider range. Professor Marshall's work was indeed useful and many-sided. He was not only distinguished as an anatomist, a physiologist, a pathologist, and a surgeon; but as President of the Royal College of Surgeons and of the General Medical Council he took an active and important part in shaping recent medical polity, and in both these offices exhibited administrative powers and political insight of a rare and very high order. Indeed, there are not a few who think that, eminent as were his labours in the more scientific and technical departments of professional work, his peculiar and special excellences were most conspicuous in the domain of medical politics and statesmanship.

EPILEPTIC DELIRIUM.

IN the *Centralblatt für Klinische Medicin*, 1891, No. 6, an abstract is given of an interesting paper by H. A. Wildermuth on Epileptic Delirium. The author first treats of the chronic psychical degeneration occurring in epileptics, which has been long recognised and studied, and is characterised by steadily progressing weakness of intellect, which is easily detected, and needs no special description or comment. The transitory delirium or incoherency is more interesting, and demands more attention. It may be divided into two large classes:—1. The psychoses, which are combined with more or less complete loss of consciousness. 2. The psychical alterations, which are not so accompanied. To the first division belongs the epileptic stupor which often occurs in connexion with severe attacks, and which may reach any stage, from total loss of consciousness to the capability of performing simple conscious acts. When consciousness has returned, or partially so, hallucinations are frequent, generally having a grotesque purport, and driving the patients almost to the verge of death from fright, or putting them in a delirium of joy. These forms generally follow an epileptic seizure, seldom replacing it and never preceding it. The second group is far more often met with. In the less marked cases there is only a change of "natural inclination." According to the relation of time which the mental defects bear to the epileptic fit, four forms may be distinguished:—1. The psychical changes are equally distributed over a series of attacks. 2. The morbid condition of mind is entirely different before and after the fits; before it is depression, after exaltation; or this order may be reversed; in the same patient the same sequence is nearly always followed. 3. The delirium is only apparent after the attack has completely passed, and usually takes the form of querulous mania. 4. The psychical phenomena may take the place of a fit. The mental complications are very different when occurring with purely cortical epilepsy; the disturbances of the intellectual balance appear late, and seldom reach an extreme grade, and recovery usually occurs.

NOTTINGHAM METEOROLOGICAL AND MORTALITY RETURNS.

FOR some years past it has been the custom to issue from the municipal buildings at Nottingham a record of the meteorological conditions observed in the preceding year, the records being prepared under the direction of the borough engineer and the medical officer of health. Those issued this year by Mr. A. Brown, C E, and Dr. P. Boobbyer are, if anything, of even greater value than formerly; and it is especially noticeable that much trouble has been taken in setting out the materials collected, both as to climatic conditions and mortality, in diagrammatic form. Such returns are of great value. Their true worth cannot be judged by single reports, but when the causes of a given disease come to be studied it is important in the extreme to have at hand a trustworthy record of all the complex circumstances which constitute for a given locality that which is known as its "climate." It is because of the paucity of returns compiled with similar exactness and care that our knowledge remains so deficient with regard to the true influence of climate and meteorology in the etiology of disease. With increase in accuracy of notification of disease we may hope to see comparison made between local meteorological conditions and attacks from different diseases. Hitherto fatal attacks have alone been dealt with.

CIRRHOSIS OF THE LIVER AND NERVOUS SYMPTOMS.

IN the St. Bartholomew's Hospital Reports, vol. xxvi., Dr. Ormerod directs attention to a curious and important class of cases in which extreme cirrhosis of the liver is present, and in which the symptoms are mainly nervous. He relates the particulars of one which was under the care of Dr. Gee. The patient was a boy of ten, who had three or four months before admission developed weakness with cramped position of right hand and arm and difficulty in speaking. This condition became more pronounced, and was accompanied by gradual mental impairment, difficulty in swallowing, and finally some affection of the left arm and hand. During the time he was in hospital his condition was characterised by severe attacks of pain, extreme noisiness, and idiotic appearance. The electrical condition of the muscles remained unchanged in spite of the contractures and weakness. During the last three months of life he had occasional attacks of pyrexia, sometimes with profuse sweating; he developed bedsores; the urine became alkaline and phosphatic, and mental hebetude became extreme. The optic discs and fundi underwent no change. At the necropsy the liver was found to be in a state of extreme cirrhosis, and the only lesions found in the nervous

system were two small, almost symmetrical patches of softening in each lenticular nucleus, and two minute points apparently also of softening in the pons. Dr. Ormerod, in his comments on this case, mentions one or two similar cases, of which, however, he is unable to give full notes; but reference is particularly made to a set of cases recently published by Professor Homen in the *Neurologisches Centralblatt*. These cases were three in number, and the patients were all members of the same family. Their symptoms were giddiness, headache, mental failure, unsteady gait, and difficulty of speech, together with contractures of the limbs, and in two of them there were found, in addition to slight changes in the cortex cerebri, softening in both lenticular nuclei and well-marked cirrhosis of the liver. These cases offer a new problem in symptomatology, for, whatever may be the relation of the slight changes found in the nervous system to the symptoms produced during life, there seems to be little room for doubt that the fundamental morbid condition is the cirrhosis of the liver.

THE INFLUENCE OF EXERCISE ON DIGESTION.

DR. STRENG, in a lecture before the Medical Society of Giessen on the Influence of Exercise on Digestion, which has been published in the *Deutsche Medicinische Wochenschrift*, states that he concludes from his own experiments that this influence is of a retarding nature. His experiments, however, suffer from the fact that he always injected 300 cubic centimetres of water before obtaining the contents of the stomach, so that the proportion between gastric juice and water continually varied. The first experiments in the clinic at Giessen were made on two dogs. Twenty-five grammes of meat, suspended in 300 cubic centimetres of warm water, were twice injected into the fasting stomach, and after one feeding the dogs were compelled to remain for three hours in absolute bodily rest, while after the other feeding they were made to take active exercise. After the three hours the contents of the stomach were obtained and analysed. The quantity did not essentially differ in the two cases; the experiments consequently tended to prove that exercise does not influence the time required for digestion. The chemical analysis also detected no difference. The same results were obtained by substituting the white of an egg for the meat. The experiments were then repeated twenty-five times on three men with healthy stomachs. Two of these suffered from sycosis, and the third from incipient muscular atrophy. They were fed each time with 200 grammes of minced meat, a bun, a plate of bouillon, and three spoonfuls of mashed potatoes, and the contents of their stomachs were obtained four hours and a half afterwards. The exercise after meals consisted partly in gymnastics, partly in walking; absolute rest was obtained in bed. These experiments gave the same results as those on the dogs, the difference resulting from the chemical analysis being especially imperceptible. The author therefore concludes that the gastric function is in no way influenced either by muscular action or by absolute rest.

TUBERCLE OF THE LARYNX.

THE article in *Virchow's Archiv*, Bd. cxxi., by E. Fraenkel, on the Etiology of Tubercle of the Larynx, will well repay perusal. The task the author set himself was to answer two questions: 1. Whether all ulcerations of the larynx in phthisical subjects were to be considered as specific, or whether ulceration may sometimes be due to other causes than the tubercle bacillus? 2. Is tubercle of the larynx the product exclusively of tubercle bacilli in the tissues of the part, or are other organisms also concerned in intensifying the effects and supporting, as it were, the action of the true pathogenic organism? By careful microscopic examination, and also by means of cultivation experiments, the following results were arrived at. The presence of tubercle bacilli in the tissues is the most important factor in the production and further development of the characteristic changes in the larynx; but in a considerable number of cases a secondary infection may take place in the affected tissues by other micro-organisms, such as the staphylococcus and streptococcus. In thirteen out of eighteen cases these organisms were found in addition to tubercle bacilli. It appeared, however, that deep ulceration producing exfoliation of the cartilage is purely the result of the action of the tubercle bacilli. Again, in the ulceration usually designated as "aphthous," or "lenticular," the bacilli were always found. Fraenkel is very strongly of opinion that, according to his researches, the bacilli reach the deeper tissues through the epithelium, although this may be little, if at all, diseased. The number of bacilli present seems to stand in no relation to the intensity of the destructive process. In general, the axiom propounded by Baumgarten and Weigert holds good—namely, the more numerous the giant cells, the less in number are the bacilli. The entry of the streptococcus and staphylococcus is always secondary, the tubercle bacilli invariably lying deeper in the tissues. The phlegmonous process that sometimes occurs may, indeed, be caused by micrococci. In one case in which there was an ulcer in the trachea from which an abscess had spread into the front part of the neck only micrococci could be discovered, and no tubercle bacilli. In reference to the second question quoted above, the author states as his opinion that any marked disease of the larynx in consumptive patients must be considered as the product of the tubercle bacillus; but the results are commonly intensified by the engrafting of pyogenic organisms. Fraenkel only twice found disease of the larynx in tubercular subjects from which tubercle bacilli were absent. In one of the cases there was a shallow ulcer on the inner surface of the arytenoid cartilage above the processus vocalis, this being the only lesion to be seen in the larynx and trachea. In the second case the trachea was the subject of disease, this being undoubtedly of a tubercular nature; but over the processus vocalis was an ulcer in which no bacilli could be found, and which Fraenkel thought was not specific. These non-tubercular ulcers are to be considered as mycotic necrosis of the epithelium, being a similar process to that which occurs in enteric fever.

THE REGISTRATION OF BRITISH NURSES.

THE opponents of the Royal British Nurses' Association held a meeting on the 27th ult. at St. Thomas's Hospital for the purpose of concerting measures to oppose the licence to register the Society without the word "limited" as a part of its title, for which application has been made to the Board of Trade. To say that objections can be urged against the proposed register of nurses is to say no more than that it is like everything else that is human, whether good, bad, or indifferent. It was proved with much energy of conviction that no register could exhibit, and no registration test could determine, all the qualities of a good nurse. All this may be freely admitted, and yet it may prove in the end desirable that a register should be established for the purpose of recording and publishing such facts concerning the qualifications of nurses as are capable of being scheduled. The present is, however, hardly an occasion that calls for a discussion of these general questions. Whether the Royal British Nurses' Association shall be registered by that title or by the title of the Royal British Nurses' Association (Limited) is not an issue which naturally or properly leads to a general discussion of its merits. Its promoters are entitled to registration under the Companies Acts if they satisfy certain statutable conditions concerning the raising and holding of their capital and other property, and they are

entitled to registration in the way desired if they satisfy the Board of Trade that their Association is formed, not for profit, but for the purpose of promoting "art, science, charity, or any other useful object," and that the intention is to apply the profits, if any, or other income of the Association, in promoting its objects, and to prohibit the payment of any dividend to the members of the Association. We cannot imagine that they will find any difficulty in furnishing this proof, and if so the present opposition will be futile. Under the circumstances it seems to us to be singularly ill timed, for although the considerations agitated at the St. Thomas's Hospital meeting would be very proper to be laid before the Privy Council on an application for a charter, they ought not to affect the decision of the President of the Board of Trade.

EXPERIMENTS TO DETERMINE THE CENTRE OF RESPIRATION.

DR. LABORDE communicates to the "Comptes Rendus de la Société de Biologie" the results of experiments made by him to ascertain the nerve centre for respiration, promising a larger work at some future time. He found that superficial mechanical injury to the region of the alæ cinereæ does not accelerate respiration; a deep puncture decreases, or even temporarily arrests, respiration; if the injury penetrates at least to the middle of the substance, respiration may cease altogether. This result is always obtained if a certain circumscribed portion of the substance is cauterised with the hot iron. This portion need in the rabbit be only half a millimetre in diameter, in the dog from one to two millimetres. The iron must, however, enter immediately above the apex calami, and must penetrate at least half the substance from the raphe. If the injury is unilateral, respiration may continue for some little time on the opposite side. Total separation of the medulla below the apex calami always arrests respiration of the trunk, while that of the head continues for some time. Spinal reflexes continue, and even increase; irregular superficial contractions of the respiratory muscles, leading to no results, may be observed. The increase of the reflex action is especially remarkable in new born animals. No parts of the brain above the medulla oblongata, including the cortex, the corpora quadrigemina, and thalami optici, have any specific influence whatever on the respiratory muscles.

WEATHER CHANGES AND THEIR WORK.

EVERY winter as it passes leaves behind, in evident marks of disease and death, proofs of the close relation at all times existing between man and his constant environment of atmospheric temperature. We have already had occasion to notice the consequence in certain cases of exposure to the mere cold of the recent severe winter, and to trace in them the somewhat unfamiliar evidences of frost bite, systemic and local. We have still more recently had to do with related influences, which, however, belong to another class, and though apparently less violent in their action, are even more dangerous on account of their more insidious and uncertain operation. No sooner has the thaw set in, and a promise of coming spring breathes now and then through the lengthening days, than there come also the petty chills, obscurely localised, of unaccountable origin, prone to be overlooked by the sufferer and those about him, yet full of mischievous possibility. These are the natural accompaniments of the breaking season, the morbid counterpart of those perpetually changing movements of temperature, moisture, and air density, which by degrees and with some amount of bodily illness and discomfort will bring us forward to more equable conditions. To find these latter will be Nature's fee to tried and enduring organs, but some will have perished in the trial. Perhaps not a few even of the stronger constitutions, endowed with much elastic vitality, will not have met without grave change and peril the swift variations of weather which we have lately had to face. Certainly we may say that when spring is reached many of the feeble young and the time-stiffened aged will not have safely passed through the daily alternations of frost and balmy sunshine, with sudden gales and chill overburdening fogs, but will have found among them the end of their earthly way. For all, but especially for such as these, avoidance is the truest caution. But this is not always possible, and careful management of the person therefore becomes an imperative and somewhat anxious duty. In particular, let us urge the necessity of warm woollen clothing. No form of clothing is equally protective. Further, it is to be hoped that the public may be wise enough to summon their trusted medical advisers to treat at the outset the beginnings of illness, or to follow out by consecutive measures the morbid changes immediately following. By the time that a mere chill has developed into pneumonia, for example, the fittest opportunity for treatment is already passing away, for in this class of diseases we must sow betimes our remedies if we would reap success.

MEDICAL REPORTS AND THE PROOF OF INSURANCE CLAIMS.

WE receive from time to time complaints from so many medical practitioners of the demands which are made upon them in connexion with the proof of claims upon insurance offices arising upon the death of patients that we have thought it desirable to inquire fully into the subject, and to state for the benefit of the profession generally the result of our inquiries. The practice which gives rise to this discussion is this: When a claim is made upon an office two things have necessarily in every case to be proved—namely, the death of the person whose life was assured, and the title of the person claiming to receive the proceeds of the policy. Most offices, however, stipulate for something more than this—that is to say, for a report by the medical attendant upon the fatal illness. Such a report is interesting to the paying office in many ways. It adds statistical materials to the records of the case. It serves in some cases of long-standing illness to detect a concealment or deception that may have been practised upon the office at the time of effecting the insurance, and it affords very valuable evidence of the identity of the deceased person. All these are points upon which the directors of the company may reasonably enough desire to be satisfied; and if they have stipulated with their policy holder that such evidence shall be given, they may reasonably enough ask to be satisfied at his expense. It appears probable, however, that the demand is made in behalf of some companies which have no right to insist upon it, having undertaken, as the phrase runs, to pay on proof of death and title. When that is the case the demand ought to be resisted by claimants, but the practice is now so general that a claimant seldom knows whether he is liable to satisfy it, but always assumes that he is. He therefore asks the medical attendant to fill up the form, and becomes liable to pay him the fee for so doing. But he commonly expects to get it done gratuitously, and we believe that the custom of many practitioners is to acquiesce in this course. In the circumstances it must no doubt be left to medical men to deal as they think proper with every particular case. We entertain no doubt that the legal right is what we have indicated above. If the offices became liable in these circumstances to pay the fee, there could be no difficulty or delicacy about exacting it. Unfortunately, however, that is not the case, for the practice, and we believe invariable practice, is to ask not the medical

attendant, but the claimant, to provide such a report. This interposition of his patient's representatives at such a time between him and the office is undoubtedly a hardship to the medical attendant. The difficulty in the way of its removal is, however, so far as we can see, insuperable. The claimant must necessarily be the paymaster, and as the office stands in a more or less hostile attitude to him, it is not likely to take any part of the burden off his shoulders.

THE DISFIGUREMENT OF KENSINGTON GARDENS.

IN order to justify, if that be possible, such an evident barbarity as is contemplated by the Paddington and Kensington Subway Bill, there must at least be the prospect of great public advantage or the proof of a great public necessity. Neither of these conditions has up to the present time been shown to exist. On the contrary, there is already very free communication by road and rail between the parishes already mentioned. Yet it is proposed, with little or no reason beyond that afforded by the mere enterprise of speculation, to deface one of the most tastefully planted and most popular of the larger parks with which London is favoured. It is not therefore surprising that under the circumstances Mr. Plunket was recently questioned at some length in the House of Commons as to the scope of the proposed measure, and it is evident that so important a matter as the preservation of this beautiful area has been far too little considered. Among other matters, we learn that a number of trees will be permanently destroyed. This is hardly suggestive of subterranean transit under ordinary conditions, but is rather indicative of an overground route, which, whatever its advantage from a commercial standpoint, could not fail to disfigure the park, and, in our opinion, quite needlessly. The Bill has already passed a second reading, but we have it on record, by way of consolation, that the Select Committee, the subscribing public, and, lastly, Her Majesty, who is the final custodian of this Royal gift to the metropolis, may refuse to sanction the proposed very material alterations in its character. There can be no doubt that the scheme in its present form is impossible, and it clearly behoves the committee, to whom its future course is now for a time entrusted, either to refuse it altogether as a needless and vandalic undertaking, or to ensure for the subway a passage which will be undestructive, underground, and unobtrusive.

SURGICAL TREATMENT OF PULMONARY CAVITIES.

THE bold endeavour to radically attack phthisical cavities and drain them, although introduced some years ago, has been lately receiving fresh advocacy, especially in relation to the treatment of phthisis by Koch's "tuberculin." Many of the dangers of this remedy in advanced cases of phthisis rest upon the retention of necrotic material within the lung, and the liability to its being inhaled into previously unaffected areas. Dr. Sonnenberg recently operated upon four cases undergoing this treatment, and Dr. E. Leser of Halle reports two more.[1] One of these was a female aged forty-three, who had had symptoms for four years, and presented physical signs of excavation at the left apex. The operation consisted in making an incision in the first intercostal space, seven centimetres long, and, after dividing the muscles and securing blood-vessels, introducing a trocar in the direction of the cavity. Although no fluid could be obtained, it was evident that the point of the trocar was in the cavity, and the pleurae being firmly adherent, an aperture was bored through the layer of tissue overlying the cavity by means of a Paquelin's cautery, the trocar being taken as a guide. The cavity was the size of an apple, had somewhat irregular walls, and was coated with flakes of inspissated pus and caseous matter; these were removed, and the cavity stuffed with antiseptic gauze. Subsequently the patient was injected with Koch's "tuberculin," which always caused increased discharge from the cavity; and later still some of the fluid was directly introduced into the cavity itself. At the last report the patient had improved much in general health, and the cavity had dwindled to one-half its former size. The second case, a man aged forty-two, was similar, except that in him the cavity was no larger than a chestnut, and was situated at the right apex. Here, too, the use of tuberculin produced increased discharge, and on one occasion its direct injection into the cavity was followed by severe vomiting, dyspnœa, and other alarming symptoms. Dr. Leser, however, thinks this mode of treatment has a future before it. At present he would make it a *sine qua non* that the costal and pulmonary pleuræ should be firmly united, as they usually are when cavities are of some standing; and he enters fully into the technique of the operation, laying stress upon having a fairly large incision through the thoracic wall, but not a very large aperture made in the lung, since this will be sure to increase by sloughing. The notable feature of these cases seems to be the immediate relief to cough and expectoration given by the external opening, although when the injections are resorted to, the secretion becomes so much more abundant.

[1] Münchener Med. Woch., Feb. 24th.

LENTEN FASTING.

A TENDENCY to asceticism is not a distinguishing feature of the British character, and it naturally follows that the austerities of Lent have no very wide prevalence among us. Systematic fasting still is observed indeed, but it is at best the custom of a considerable minority. Yet it cannot be said that the practice in itself is necessarily an unwholesome one. In some cases and in due measure it is probably advantageous in a physiological sense. In others it is, judged by the same standard, but little to be recommended. The habitual and full flesh-eater, for example, may well intermit his daily round of two or three meat meals by allowing an occasional fast day, and the rest thus afforded his overdriven digestive organs will be repaid in his present comfort and their subsequent healthy action. We might even go so far as to say that few persons in robust health would not rather benefit than otherwise if the more stimulating elements in their food were at stated intervals, say, once a week, omitted or reduced in favour of the more bland. There are, however, other persons whose condition is at any time under par, and these may nevertheless, nay often do, exhibit an almost abnormal zeal for abstinence. Here, again, physiological rule is in danger of infringement. In such cases fasting in any strict sense, whatever its moral relation to the soul of man, amounts to a sin against his body. A clerical writer, on fasting in Lent, sees fit to rally the medical profession on its assumed reluctance to control those excesses in diet which provide it with occupation. We will not mistake for earnest a jest so trite and so manifest. The above remarks, however, will serve to show that medical practitioners are careful above all to inculcate moderation as the rule of life, and to impress its importance upon the too eager and self-afflicting spirit no less than on the unbridled appetite. Since it is, after all, the physical condition which must qualify or disqualify in a matter of this kind, it is obviously advisable that anyone desirous of fasting should consult his medical adviser before so doing.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Dr. Laufenaur has been promoted to the full rank of Professor of Mental Diseases.

Erlangen.—Professor Leo Gerlach has been promoted to the chair of Anatomy, Dr. Friederich Hermann taking his place as Prosector, with the rank of Extraordinary Professor.

Florence.—Dr. A. Lustig has been appointed Extraordinary Professor of General Pathology.

Giessen.—Dr. Hoingman has been recognised as *privat-docent* in medicine.

Heidelberg.—Dr. Hofmann has been promoted to the chair of Nervous Diseases. He was a pupil of Erb, and has been his first assistant for several years.

Rome.—Dr. Conasanti has been appointed Extraordinary Professor of General Pathology.

Vienna.—Dr. A. Edler von Rosthorn has been approved as *privat docent* in Midwifery and Gynæcology.

AT the meeting of the Royal Medical and Chirurgical Society next Tuesday, March 10th, Dr. Hale White and Mr. Golding-Bird will, between 8 and 8.30 P.M., before they read their paper, demonstrate by means of the phonograph the peculiarity of speech to which the term "Idioglossia" has been applied. The children as improved by treatment will also be shown. Dr. F. Taylor and Dr. Hadden will also show cases.

AT the next meeting of the Hunterian Society on March 11th Dr. Hughlings Jackson will exhibit Phonogram-talking of a Patient the subject of Disseminated Sclerosis.

AT the meeting of the Medical Society of London on Monday next, the adjourned discussion on Angina Pectoris will be opened by Dr. Lauder Brunton.

MR. HERBERT F. WATERHOUSE, M.D., C.M. Edin., F.R.C.S. Eng., has been appointed Assistant Surgeon to Charing-cross Hospital.

DR. H. P. HAWKINS has been appointed assistant physician to St. Thomas's Hospital.

PROFESSOR KOCH'S TREATMENT OF TUBERCULOSIS.

PROFESSOR VIRCHOW, at the meeting of the Berlin Medical Society on the 25th ult., again referred to Koch's treatment, and showed some specimens in illustration of his remarks. He doubted whether the statement by Dr. B. Fraenkel, as to the duration of miliary tubercle, based on inoculation experiments, was correct—namely, that a period of three weeks is required for its development. The question was one to be decided by clinical observers, for it could not be determined by pathologists. If one were to admit that in all those cases in which miliary tubercle is found this has been present before the injections were practised, then a much longer extension must be given to the duration of miliary tubercle than has hitherto been assigned to it. A distinction in this respect must be made between local tuberculosis and the general acute disease which creates such marked constitutional disturbance. He detailed a case of pleuritic effusion under the care of Professor Leyden, in which phthisical signs, with laryngitis and fever, developed whilst under treatment by Koch's injections, death supervening four weeks after the first injection. In this case there was very marked general miliary tuberculosis,—submiliary granulations occurring in liver, kidneys, thyroid, larynx, and in parts of the peritoneum, including the recto-vesical pouch, as well as in the lungs, which were also the seats of old apical mischief. Here was a case which certainly did not come under the class referred to by Dr. Fraenkel, for it had been long under observation and had been injected before the supervention of the acute tuberculosis. Professor Virchow also showed a lung from a patient who had received eight injections which presented a large caseous mass in process of separation, and an intestine exhibiting a very marked eruption of tubercles and implication of the lacteals in the vicinity of ulcers.

Professor Cantani of Naples, in giving the results of his experience with Koch's remedy (*Berl. Klin. Woch.*, No. 9), points out that the important part of the method is the production of local reaction, which in some cases occurs without any general febrile disturbance. This local reaction, he said, is nothing else than a quickening of the natural processes whereby the organism seeks to get rid of the *materies morbi*. He found more marked improvement in cases where there was no fever and only slight local reaction—cases in which the commencing doses were very small, and their repetition with slight increase in quantity made at some intervals. He further explained that many of the alleged dangerous results of the treatment are prone to occur in the spontaneous course of tubercular disease, but may occur more readily and rapidly from the hastening of the necrotic process by the injections. Nor should the result of every case that is fatal whilst undergoing this treatment be assigned to the latter; and he did not doubt that when the time came for a full survey it would be found that the favourable results would counterbalance the unfavourable As to the prospect of Koch's fluid curing tuberculosis, Professor Cantani remarked that the changes observed in lupus were very hopeful. In the lungs the physical signs denote the occurrence of similar changes to those observed in lupus, and the increased bacillary expectoration was evidence of the focus being destroyed. But the impediment to the free removal of the necrosed area in the case of the lungs was against marked progress, although this was noted in some cases. The laryngeal cases showed more obviously the local improvement. Professor Cantani points out that phthisis embraces not only tuberculosis, but other septic processes due to the presence of pyogenic organisms; so that in advanced cases little can be expected from the treatment, which in such must be followed with the greatest caution, if at all. He did not think the time had arrived for a definite conclusion to be formed as to the efficacy of the method in phthisis, and deprecated too great enthusiasm on the one hand and depreciation on the other as contrary to the interests of truth. The remedy was new and its effects striking, but it must be further studied before its practical value is appraised. At any rate, Koch had shown the path to be taken by bacteriology in the future, and the progress of knowledge would cause its further extension.

At the Aerzte Verein in Prague last week Professor Chiari gave an account of seventeen further necropsies on cases of tuberculosis treated with Koch's fluid. He divided them into two main groups. In seven, mostly in children, the doses had been small and the results were mostly negative. In one case—a woman—temporary extension of the dulness was noted clinically, but nothing was noticeable post mortem. In the second main group distinctive reactive changes were always present. He placed them in three classes: 1. Cases of severe tuberculosis. 2 Surgical tuberculosis. 3. Miliary tuberculosis apparently contemporaneous with the injections. The first class all showed the hyperæmic exudation to which he drew attention in his first cases. In one case where there was laryngeal ulceration the appearance of the tuberculous tissue was much more necrotic than usual. In another, where two distinct ulcerations could be seen with the laryngoscope some time before death, the aid of the microscope was necessary to show its existence post mortem, when one very small (healing?) ulcer was detected. The other seemed quite healed. In another case, where the tuberculosis was extensive, almost the whole lung was in a condition of hepatisation, and there was hardly any air-containing tissue left. In the bronchial glands in this case the miliary tubercles appeared almost like sequestra. The second class seem to promise most for the success of the treatment, as some ulcerations appeared to be almost healed. In one

case, where there was also a tuberculous nodule in the lung, it was surrounded by a species of colloid matter. The third group compels the most serious consideration. Two cases of not very severe tuberculosis after the second injection developed miliary tuberculosis. In conclusion, he dwelt on the power of the injection in causing inflammatory hyperæmia, and re-enunciated the caution about using the fluid where there is extensive disease, as the reaction may practically obliterate the patient's already diminished breathing space. Curative processes were sometimes distinctly present. The cases of miliary tubercle, though demanding most serious consideration, were too few to draw any definite conclusion from. In answer to Prof. Jaksch, he said that he had not examined the blood, as the process was so unreliable post-mortem.

ROYAL SOCIETY.

THE following are abstracts of three papers read on Feb. 5th by Dr. ANDERSON STUART, Professor of Physiology, Sydney University:—

On the connexion between the Suspensory Ligament of the Crystalline Lens and the Lens Capsule.—The common teaching is that there is a direct continuity of substance between the suspensory ligament and the capsule of the lens, but an observation by the author of the paper seems to indicate that the ligament is only cemented to the capsule. On opening eyeballs in an advanced state of decomposition (putrid), he found the lens in its capsule perfectly free, and no indication of any rupture of tissue along the line of attachment of the suspensory ligament. This ligament was found intact, projecting from the collapsed vitreous body as a sort of frilled ring with a free edge. These points are best seen after the Gross staining of the structures, as described by the author in the *Journal of Anatomy and Physiology*. The observation bears upon the still unsettled question of the development of the lens capsule, and upon cases of detachment of the ligament from the capsule, of atrophy and solution of the ligament, and of luxation of the lens.

A Simple Mode of demonstrating how the Form of the Thorax is partly determined by Gravitation.—Remembering how potent and how constant is the action of gravitation, and arguing that the segments of the thorax were so many rings of more or less elastic matter, the author concluded that if similar rings of any other elastic material were suspended in the same way, the form of the thoracic segments should be reproduced, provided there intervened no other condition strong enough to counteract the action of gravitation. The author finds crinoline steel most convenient, though bands of paper do very well. The forms of the thoracic segment of the quadruped, of the human fœtus, and of the human adult are necessarily reproduced if the hoop be held between the finger and thumb and gradually turned from lying in the vertical to lie in the horizontal plane. The complete reproduction of the features of the human adult thorax at its most characteristic level is most striking; this is when the steel as usually sold is some six feet long and half an inch wide. As the hoop is made smaller the forms of the higher segments appear in succession. The points that are thus reproduced are so numerous and simultaneous that the author cannot believe them to be mere coincidences, and concludes, therefore, that gravitation has had a greater influence in determining the typical form of the chest than would generally be admitted. This is supported by the shapes assumed by the steel rings when the mode of suspension is varied from the normal, as in deformities of the vertebræ; here the particular form in the individual—the thoracic deformity—is more or less accurately reproduced.

On a Membrane Lining the Fossa Patellaris of the Corpus Vitreum.—The existence of a membrane here had been the subject of discussion *pro* and *con.* till 1886–87, when the matter was considered by some to have been finally set at rest by Schwalbe, who decided against it in very clear and explicit terms. According to his description the vitreous jelly itself lies against the lens capsule and forms the posterior boundary of the canal of Petit, if such it could be called, for the canal, he says, is merely to be compared with the other clefts in the vitreus. Any membrane that had been seen he declares to be an artificial product the result of the action of reagents. The author, however, finds that in the perfectly fresh, unaltered eye, after the removal of the lens and its capsule the membrane may be raised off the jelly, and that when stained and mounted it does not disclose any structure. Isolated and tied over the mouth of a test-tube, the membrane from a four year old ox sustained a column of forty inches of water, and a somewhat smaller column than this may be sustained for days. Isolated and dried it forms a delicate membrane. It is thinner in the centre where it lies against the lens capsule, thicker peripherally where it forms the posterior wall of the canal of Petit, which is thus a true canal. The line of separation of the two parts is fairly sharp, and when the entire vitreus is squeezed the middle of the anterior face may be seen to bulge more than the periphery does. The sun's rays concentrated upon it show fluorescence as marked as in the case of the hyaloid, and at a puncture the fluorescent sharp edge of the membrane is strikingly distinct from the glassy appearance of the jelly showing through the hole. Treated with picrocarmine by the Gross method of staining (described by the author in the *Journal of Anatomy and Physiology*), the membrane is red, the jelly is yellow, and now its wrinkles, as the vitreous floats in the water, are seen just as in the case of the hyaloid. In successful meridional sections of the eyeball the membrane is seen *in situ*. For ophthalmological practice a knowledge of the existence of this membrane is most important, and the observations of ophthalmologists strongly support the author's observations.

EMERGENCY RELIEF DURING THE GREAT FROST IN PARIS.

CONSIDERABLE surprise and admiration have been expressed throughout Europe at the prompt and wholesale character of the relief given to the homeless in Paris during the recent severe weather. Casual wards had already been established in Paris, where applicants may receive hospitality for three nights. They are given a good douche, a bowl of soup in the evening, a piece of bread in the morning, and their clothes are stoved and disinfected during the nights. The accommodation thus afforded in normal times by the municipality amounts to 244 beds at the Quai Valmy refuge, 225 beds at the Rue Châteaux des Rentiers, and 200 beds for women at the Rue Fessart. There are also night refuges organised by private charity in the Rue St. Jacques for 130 women and fifty children, and in the Rue Labatt for forty more women. For men there are 140 beds in the Rue de Tocqueville, 250 in the Rue Charonne, and 210 in the Boulevart Vaugirard. Thus in normal times the Municipality provides 669 beds, and private charity 820. The help thus given contrasts favourably with our English workhouses and casual wards in the sense that nothing is done to humiliate the recipients of the relief. It is considered that they are entitled to the hospitality given, at least in the municipal refuges, as a sort of return for the taxes they have paid in more prosperous days.

When the great winter set in the 1489 beds mentioned above were rapidly filled, and the doors of the Municipal Councillors, who consent to receive applications from inhabitants in distress, were besieged by starving crowds. Dr. Paul Brousse, Vice-President of the Municipal Council, received in one single morning 280, all from his own district, which consists of but one-eightieth part of Paris. A great number of these applicants had been driven from their homes through inability to pay the rent, and therefore could not receive relief from the Assistance Publique, as inquiries must first be made at the domicile of the applicant. Dr. Paul Brousse—and we are glad to note that what was done was due to the initiative of a member of the medical profession—called in M. Thuillier, a fellow Municipal Councillor, as a witness of this distress, and together they applied to M. Alphand, Prefect of the Seine, insisting on immediate action. M. Alphand responded by at once establishing eighty braseros, or open fire-grates, in the streets, so as to revive those who were weakened by the cold. Half an hour later Dr. Brousse and his companion called on M. Peyron, the Director of the Public Assistance, who declared that stretchers were blocking the space between the beds in the hospitals, so great was the crush of the sick poor. Proceeding to M. Menant, Director of Municipal Affairs, who

has in his charge the night refuges, it was at once agreed that supplementary night refuges must be opened. The bureau of the Hôtel de Ville was convoked by urgency, and with the greatest promptitude it organised relief in a wholesale manner. What is most remarkable is the readiness with which Dr. Brousse's efforts were supported by the authorities concerned, the absence of red tapeism, and the rapidity of the action taken. Abroad we have heard principally of the night refuge, which held some 2000 persons, organised in the art galleries in the exhibition palace of the Champ de Mars, and the pavilion where 100 women received shelter. But other supplementary refuges were opened in the Gymnasium Voltaire for 800 persons, in the gymnasium of the Rue d'Allemagne for 330, in the Rue Cléraut for 180, in the Rue Pajol for 200, in the Rue St. Maur for 190, and in the Rue Jenner for 30 women. Altogether an average population of 3900 to 4000 was provided in these supplementary refuges with food and sleeping accommodation. The maximum reached on any one day was 4500. The beds consisted of a straw mattress and a military rug provided by the War Department, and the Municipality provided the management, the premises, and soup morning, noon, and evening. Soup was also given to those who did not sleep at the night refuges, but who declared they were in want. Altogether as many as 24,000 servings of soup were given out in a day. This soup was made of dry vegetables, such as haricot beans, peas, lentils, salt, and lard. Bones could not be obtained at a sufficiently low price or in large enough quantities, and of course all green vegetables were exorbitantly dear during the frost. It is calculated that the soup cost about seven centimes per portion; a little more than a halfpenny, and a little less than three farthings. At this rate two persons would be fed for three halfpence; and the lard was found a fair substitute for meat. Soup of this description still continues to be distributed at all the refuges throughout Paris to the poor in the neighbourhood. Though the weather is now much milder, 17,000 portions of soup per day were given out last week.

Of course, it will be objected that such widespread charity, distributed without question or check, must tend to pauperise a number of people. This is not the view the Parisians take of the matter. They argue that it must tend to maintain the vitality of the race and to prevent illness and death. Undoubtedly many of the recipients were unworthy objects; but it was practically impossible to separate the chaff from the corn. The object in view was to save life and not to inquire into the moral character of those who were evidently suffering. The difficulty that does cause some anxiety, and even alarm, is the necessity of closing the temporary refuges opened during the exceptional stress of the weather. Of course, a considerable number of the occupants of the refuges have obtained work and have left, but some 2500 still remain, and among these are the individuals who are the least worthy of sympathy. They were naturally the first to come, and will be the last to go. As the weather is now milder, and there is no longer the same excuse for the distress, questions are put to those who remain in the refuges. Of the 2000 at the Champ de Mars it was found that 1200 had their papers in order, and could give satisfactory explanations of themselves. No less than 600 had flocked into Paris from the outside rural districts as soon as they heard that relief was so freely given in the capital. Arrangements will be made to send them back to their native districts. Of the thousands helped only some 500 persons seemed reluctant to give explanations about themselves or allow inquiries to be made. Setting down the number of persons received in the night refuges established to meet the exceptional distress at an average of 4000, the advisability of helping some 500 of these is open to question. Admitting that it is not right or expedient to give relief to a criminal or an incorrigible idler—and it is questionable whether even the 500 can be thus defined,—is it not better to commit this mistake with regard to the 500 dubious cases rather than neglect the 3500 other and more worthy persons? If one in every eight is undeserving, public health would be gravely compromised by the abandonment of the seven because some doubts are entertained about the eighth. Such neglect is all the more inexcusable when we consider how very small is the cost of relief like that given in Paris. There was, of course, no rent to pay, as the edifices used belonged to the Municipality. The bedding, provided by the Ministry, was certainly not worth more than eight shillings, or ten francs at the very outside. The 4500 to 5000 beds of this description cost, let us say, £1800. The bedding has not been destroyed, no attempt was made to steal any of the rugs, the wear and tear has not done more than deteriorate this property to the extent of a few hundred pounds. The management of the refuges and the distribution and the making of the soup cost, in all, £60 a day. For this very small sum, thousands of persons have been saved from the intense rigour of the winter, and all the horrors of starvation. It is not often our pleasure to record that it has been possible to accomplish with so small a sum so great a good. The braziers, on the contrary, cost £80 a day, and the heat they gave out, lost in the space of the streets, was of comparatively small service, though the expense was considerable. These fires were consequently not maintained for long.

In conclusion, we would urge that the Paris Municipality has shown us how relief can be organised very promptly, on a very large scale and for an extraordinarily small outlay. When the winter is as rigorous and the distress as exceptional as they were during January, such wholesome relief, given without hesitation, stint, or question, must have materially helped to preserve life and prevent illness.

NOTIFICATION OF DISEASES ACTS.

ON Tuesday, March 3rd, at the Clerkenwell Police-court, before Mr. Bros, Mr. Frederick Lefevre Milburn, M.R.C.S.&c., appeared in answer to a summons taken out at the instance of the vestry of Clerkenwell, charging him, under the Notification of Diseases Amendment Act, with having neglected to report for five days a case of typhoid fever which had come under his care. The case was instituted in order to ascertain the meaning of the words of the Act which require that notification shall be made "forthwith."

The first witness called was the mother of the child, who stated that in February last her child suffered from typhoid fever, and was attended by Mr. Milburn, who informed her of the nature of the disease on Feb. 12th, having mentioned to her on Monday, the 9th, that there were symptoms of typhoid fever in the case. At this point the prosecutor intimated that he could not carry the case further, as the evidence of the witness was at variance with what he had been informed had happened.

Mr. M. A. David, Barrister-at-law, instructed by Messrs. Rookes and Co., who defended the case at the instance of the Medical Defence Union, stated that as a matter of fact very serious reflections had been thrown upon the defendant on account of a total misapprehension of the circumstances. As he understood the facts from Mr. Milburn, they were exactly as the witness had stated. It was perfectly true that on Feb. 8th the doctor had been consulted, and it was most important to see what was the nature of the disease. On Feb. 9th there were certain symptoms much more developed, but it was not until the evening of the 12th that the medical man was able to determine by the general symptoms that the case was one of typhoid fever. Having done so, Mr. Milburn did not even trust the post, but on the morning of the 13th he actually delivered personally the notice that is required by the statute. It was perfectly clear that this was giving notice forthwith in accordance with the provisions of the statute. Typhoid fever was very difficult to determine until many days after the incipient symptoms had appeared, and he had come prepared with six medical gentlemen to give scientific evidence in support of that contention. He hoped his Worship would at least say that there was no reflection on Mr. Milburn, and that the whole matter had evidently arisen from some misconstruction placed upon something that the witness had told the inspector.—The Prosecutor: It may have been that some error has been committed, but the witness told both the medical officer of health and the inspector that five days had elapsed before notification, and they were quite willing to enter the box, and swear to that fact.

Mr. Bros thought the case very important; and under the circumstances, although the case could not go on, he had allowed the counsel for the defendant to make a public statement. The case ought never to have been brought there at all; and to mark his sense of the gravity of the mistake he would, although no application had been made, allow one guinea costs.

PROPOSED REGISTRATION OF MIDWIVES.

DEPUTATION TO THE LORD PRESIDENT.

A DEPUTATION from various medical bodies had an interview with Viscount Cranbrook, the Lord President, at the Privy Council Office, on the 27th ult., in support of the Bill introduced by Mr. H. Fell Pease, M.P., for the educational examination and registration of midwives. Dr. Farquharson, M.P., introduced the deputation.

Dr. FARQUHARSON said they came less in support of a particular Bill than in the interests of general legislation required by the community. It would be an advantage if the Government could grant a select committee, before which the subject could be thrashed out, and evidence taken.

Mr. SIBLEY said that in all other countries midwives were more or less under State control, but in England any woman, although ignorant and unqualified, might call herself a midwife, and practise as such. The Obstetrical Society and two or three other bodies now granted certificates, but it was most needful that all professing midwives should have to pass through a definite course of study and examination.

Mr. FELL PEASE, M.P., said he would be ready to withdraw the present Bill if the Government would appoint a select committee on the subject,

Dr. GRIGG said it had been found that of the number of women delivered in Edinburgh, for instance, 1 in 120 died within a month after delivery; and in other places he had found the proportion to be at least 1 in 100. It was often not until the last gasp that the medical man was called in.

Dr. JAMES AVELING said the services of midwives were indispensable to many of the poor who could not afford to employ medical men, and, moreover, the midwife combined the functions of the medical man and the monthly nurse. Public safety demanded legislation. There were in this country 900,000 births per annum, and of this number midwives attended about 500,000. The average mortality in childbirth was about 1 in 200; but it was found that in the cases undertaken by such trained midwives as were employed in lying-in hospitals the mortality was only 1 in 600. If this reduced rate of mortality could be extended generally, it would mean an annual saving of the lives of 3000 mothers. As midwives had at childbirth the care of two lives, it followed that the midwives of this country had annually under their care no fewer than one million lives. Surely this was a sufficient reason for legislation. It had been said that the medical profession was divided on this subject, but he believed the opposition to be an energetic minority, which did not include eminent obstetricians.

Dr. BARNES said he also thought it was most desirable that midwives should be made responsible to society through recognised bodies, so as to check illegal practices.

Dr. PLAYFAIR said he was quite satisfied that most of the objections which had been urged against the Bill were fictitious and untenable or capable of being easily overcome. It was clear that, as such a Bill could not be retrospective, existing interests must be recognised and protected.

Lord CRANBROOK, in reply, said he thought it might be taken for granted that there was an almost unanimous desire to improve the qualifications of midwives so far as it was possible to do so by legislation. More than twelve years ago there was an attempt in a Government Bill to deal with the subject, but that provision had to be taken out because of the opposition it encountered. He found there were now considerable objections taken to the County Councils having anything to do with the matter, nor was favour extended to the idea that the Privy Council as a lay body should decide the difficult question as to what was a *bonâ-fide* midwife. He would not himself like to venture upon a definition, and he did not know where he could get responsible medical advice which would enable him to lay down rules under which midwives could come upon the Register. Difficulties also arose in connexion with the protection of the interests of existing midwives, and from the fear that the legislation proposed might deprive many country districts of any midwives at all. Many of them might not be able to go to the expense of the prescribed education without making such increased charges as would disqualify them from getting such employment as they now obtained. Was it to be laid down that the mere fact of practising as a midwife after a prescribed date should be of itself considered an offence? Hitherto in this country there had been no such exclusion, and he could not help thinking that in a number of country districts the women who now undertook these duties would still be called in by the poor and would still occupy the position that they do now, even without the registration, on account of the cheapness and under a general belief that, after all, there were few cases in which serious difficulty arose. He had great difficulty in making out who was to lay down the proposed rules of education for midwives, who was to keep the Register, and who was to be responsible for it. Medical men were divided in opinion, and the Medical Council was understood to a certain extent to reject the position which would naturally be assigned to it. It would be impossible for the Privy Council to act satisfactorily in this matter unless it was supported in an official and responsible manner by the medical profession, which support at present was not forthcoming. With regard to the suggestion of a select committee, he could not at present give an answer to it, for he had not yet had an opportunity of laying the suggestion before his colleagues, and he would have to consult them. Speaking for the Government, he could not this year support the Bill which Mr. Pease had brought forward; nor did he think there would be a chance of amending it this year in a manner satisfactory to the medical profession, the public, or the midwives already in practice. With regard to the whole question, he would give it his careful consideration, and would be glad if he could meet the wishes of this and other bodies in a way which might be calculated to give the satisfaction which, he was afraid, they could not get by attempting to pass a Bill this year.

The deputation then withdrew after Dr. Farquharson had thanked the Lord President for receiving them. Earlier in the afternoon a large deputation of ladies from various nursing associations &c., introduced by the Countess of Aberdeen, had an interview with Lord Cranbrook for the purpose of urging reasons in favour of the same Bill.

THE LONDON HOSPITAL.

MR. J. H. BUXTON presided at the quarterly Court of Governors of this hospital on Wednesday last, and, in moving the adoption of the report, took occasion to correct an error he made at the last meeting in reference to the number of nurses who had been dismissed by the matron. What he should have said was that eight engagements had been terminated by the matron during the last two years. On the subject of nursing he had nothing to say except that it had been very much in the minds of the committee, who were always glad of advice and criticism, to do what they could to perfect that branch of the hospital. At the present time they were in the middle of a scheme for an alteration in that department. Nothing definite had yet been adopted with the exception of appointing two men to do certain work which had hitherto been done by the nurses.

Mrs. Hunter said that the chairman's correction was an important one, and if anything had been wanted to confirm her convictions respecting the nursing department, it had been furnished by the report. Undue responsibility had been laid on the nurses, who did not receive the pay, but had to do the work of the staff nurses, and the anxiety so occasioned tended to produce the collapse which finally occurred. The question relative to the sending of nurses to private patients had not been met by the report. She pointed out that one-fourth of the nurses, after having been selected by the matron, were afterwards rejected. She suggested that a subcommittee connected with the nursing department should be appointed to consider the questions relating to the nurses of that institution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6210 births and 4620 deaths were registered during the week ending Feb. 28th. The annual rate of mortality in these towns, which had increased in the preceding three weeks from 19·8 to 21·6 per 1000, further rose to 24·1 last week. The rate was 23·7 in London and 24·4 in the twenty-seven

provincial towns. During the past eight weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·5 per 1000, and exceeded by 0·5 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·8 in Plymouth, 14·6 in Derby, 18·3 in Hull, and 18·4 in Portsmouth; the highest were 28·6 in Bristol, 30·4 in Huddersfield, 33·9 in Halifax, and 38·9 in Blackburn. The deaths referred to the principal zymotic diseases, which had increased from 332 to 381 in the preceding three weeks, further rose to 431 last week; they included 150 from measles, 139 from whooping-cough, 52 from diphtheria, 37 from diarrhœa, 30 from scarlet fever, 23 from "fever" (principally enteric), and not one from small-pox. No deaths from these diseases were recorded in Brighton, Norwich, Plymouth, Wolverhampton, and Cardiff; while they caused the highest death-rates in Leicester, Bristol, Huddersfield, and Blackburn. The greatest mortality from measles occurred in Leicester, Huddersfield, Bristol, and Blackburn; from scarlet fever in Derby and Preston; from whooping-cough in Leicester, Huddersfield, and Halifax; and from "fever" in Birkenhead. The 52 deaths from diphtheria included 32 in London, 4 in Birmingham, 4 in Manchester, 3 in Liverpool, and 3 in Sheffield. No death from small-pox was registered in any of the twenty-eight towns, and one case of small-pox was under treatment in the Metropolitan Asylum Hospitals on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1242, and showed a further decline from recent weekly numbers; the patients admitted during the week were 80, against 97 and 113 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding three weeks from 428 to 524, further rose last week to 685, and exceeded the corrected average by 202. The causes of 102, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Bristol, Sunderland, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Preston, Huddersfield, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·4 and 22·6 per 1000 in the preceding two weeks, further rose to 23·8 during the week ending Feb. 28th, but was slightly below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 17·0 in Perth and 18·2 in Dundee to 26·6 in Paisley and 27·8 in Glasgow. The 620 deaths in these eight towns showed an increase of 29 upon the number in the preceding week, and included 27 which were referred to whooping-cough, 18 to measles, 11 to "fever," 10 to diarrhœa, 7 to scarlet fever, 7 to diphtheria, and not one to small-pox. In all, 80 deaths resulted from these principal zymotic diseases, against 50 and 62 in the preceding two weeks. These 80 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·7 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 13 and 26 in the preceding two weeks, were 27 last week, of which 9 occurred in Edinburgh, 7 in Glasgow, and 5 in Leith. The deaths from measles, which had been 8 and 10 in the previous two weeks, further rose last week to 18, and included 9 in Glasgow and 8 in Paisley. The 11 fatal cases of "fever" also showed a further increase upon recent weekly numbers; 4 occurred in Edinburgh and 3 in Glasgow. The 7 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Greenock and 2 in Glasgow. Of the 7 fatal cases of scarlet fever, 4 occurred in Glasgow and 2 in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 138 and 140 in the preceding two weeks, further rose to 146 last week, but were 55 below the number in the corresponding week of last year. The causes of 49, or nearly 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding three weeks from 26·6 to 27·3 per 1000, further rose to 29·4 during the week ending Feb. 28th. During the first eight weeks of the current quarter the death-rate in the city averaged 31·8 per 1000, the rate for the same period being 23·6 in London and 20·9 in Edinburgh. The 199 deaths in Dublin showed an increase of 14 upon the number in the preceding week, and included 4 which resulted from diarrhœa, 3 from "fever," 1 from diphtheria, 1 from whooping-cough, and not one either from small-pox, measles, or scarlet fever. Thus the deaths referred to the principal zymotic diseases, which had been 3 in each of the preceding two weeks, rose to 9 last week; they were equal to an annual rate of 1·3 per 1000, the rate from the same diseases being 1·8 in London and 3·2 in Edinburgh. The 4 fatal cases of diarrhœa exceeded the number recorded in any week since November last. The deaths referred to different forms of "fever," which had declined from 4 to 0 in the previous four weeks, rose again to 3 last week. One fatal case of diphtheria was registered, corresponding with the number in each of the previous four weeks. The 199 deaths in Dublin included 42 of infants under one year of age and 57 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recently weekly numbers, while those of elderly persons showed a slight further decline. Four inquest cases and 5 deaths from violence were registered; and 53, or nearly a fourth, of the deaths occurred in public institutions. The causes of 20, or nearly 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

A TRIANGULAR BANDAGE.

Surgeon R. R. Sleman, M.A., of the 20th Middlesex (Artists) Rifle Volunteers, has recently brought out a Triangular Bandage with a printed key to it, in connexion with the Volunteer Ambulance School of Instruction. The various figures on the bandage clearly depict the methods of using it. The bandage can be obtained of Messrs. Savory and Moore.

THE AFGHAN CAMPAIGNS.

The *Journal of the United Service Institution of India* has a paper by Surgeon-Major G. J. H. Evatt, M.D., of the Medical Staff, describing that officer's personal recollections of the Afghan campaigns of 1878–79–80. The present is the first part of the report, and Dr. Evatt proposes in a subsequent paper to deal with the occurrences of the second campaign, where much progress was made, and apparently required, and the lessons learned in 1878–79 were largely made use of. The record is interesting as it sets forth what occurred when the medical service, mobilised in a hurry and with little cohesion or defined method of work, had suddenly changed over from our old system to an entirely novel one.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Geo. Paddock Bate, M.D., 5th Battalion, the Rifle Brigade (the Prince Consort's Own), to be Surgeon-Major, ranking as Major (dated March 4th, 1891).—The notification in the *Gazette* of Feb. 10th, 1891, that Surgeon William Duncan, M.D., F.R.C.S. Eng., ceased to be an Officer of the Army Medical Reserve of Officers, is cancelled.

INDIA OFFICE.—The Queen has approved of the following appointments to Her Majesty's Indian Medical Service: Surgeons on probation to be Surgeons, ranking as Captains (dated Jan. 31st, 1891):—Bengal: James Muir Crawford, John William Wolfe, Bawa Jiwan Singh, Hugh Robert Campbell Barber, Charles Henry James, Fredk. O'Kinealy, Christopher Clemons Cassidy, and Arthur Wm. Treminhere Buist-Sparks. Bombay: Ernest Gerald Robt. Whitcombe, Frank Erskine Murray, Henry James Younger, and Baman Das Basu.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeons: Wm. B. Drew to the *Trafalgar*, Richd. D. White to the *Collingwood*, and Henry C. Walsh to the *Neptune* (all dated March 2nd, 1891); William Bennett to the *Alexandra*, (dated March 8th, 1891). Surgeons: John P. J. Coolican to the *Vivid*, for the Royal Naval Barracks (dated March 7th, 1891); Alfred E. Weightman to the *Wildfire*, additional (dated March 7th, 1891); and William O'Meara to the *Alexandra* (dated March 8th, 1891); Mr. Joseph William Gallagher to be Surgeon and Agent at Kellybegs, and Mr.

Thomas M. Pollard to be Surgeon and Agent at *Tribune* (both dated March 3rd, 1891).

ROYAL NAVAL ARTILLERY VOLUNTEERS. — (Clyde Brigade): Surgeon John MacIntyre, M.B., to be Staff Surgeon (dated Feb. 21st, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Cornwall (Duke of Cornwall's), Western Division, Royal Artillery: Acting Surgeon J. Quick resigns his appointment (dated Feb. 28th, 1891).—*Rifle:* 2nd (Prince of Wales's) Volunteer Battalion, the Devonshire Regiment: William Square, Gent., to be Acting Surgeon (dated Feb. 28th, 1891).—1st Volunteer Battalion, the Cheshire Regiment: Surgeon A. Craigmile, M.D., resigns his commission (dated Feb. 28th, 1891).—3rd Volunteer Battalion, the Cheshire Regiment: Acting Surgeon T. Fennell to be Surgeon (dated Feb. 28th, 1891).—4th Volunteer Battalion, the Cheshire Regiment: Acting Surgeon E. Chamberlayne, M.B., resigns his appointment (dated Feb. 28th, 1891).—1st Roxburgh and Selkirk (the Border): William Turnbull Barry, M.B., to be Acting Surgeon (dated Feb. 28th, 1891).—3rd (the Blythswood) Volunteer Battalion, the Highland Light Infantry: Acting Surgeon A. D. Moffat to be Surgeon (dated Feb. 28th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Edinburgh Division: William Henry Barratt, M.B., to be Acting Surgeon (dated Feb. 28th, 1891).

Correspondence.

"Audi alteram partem."

THE LATE MR. JOHN MARSHALL, F.R.S.

To the Editors of THE LANCET.

SIRS,—The former colleagues and many of the friends of the late Professor John Marshall wish to establish a memorial of him in connexion with his *alma mater*, University College, London. It is proposed that, primarily, the memorial should take the form of a bust, to be placed within the College. In the event of the contributions to the fund which is being raised for this purpose being more than enough, the surplus will be set aside for the foundation of a prize in the medical faculty of the College, to be called the Marshall Prize. As there are doubtless among your readers many of Mr. Marshall's friends and old pupils who will be glad to coöperate in this attempt to perpetuate the memory of his useful and many-sided labours, both within the profession and without, we beg to be allowed to state that subscriptions may be sent on or before April 11th next to the Treasurer of the fund, Mr. John Tweedy, 100, Harley-street, W.

We are, Sirs, yours truly,

THOMAS BARLOW, M.D.,
10, Wimpole-street, W.,
VICTOR HORSLEY,
80, Park-street, W.,
} Honorary Secretaries.

THE "REVISED SCHEME" OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Having served many years on the committees of Convocation and having given evidence before the Royal Commission on its behalf, may I again appeal to your readers on the most recent phase of the University question? The latest revised scheme of reconstitution which you have published in your columns has not yet been officially communicated to Convocation, and members of that house have been refused copies of it. This appears to be a suicidal policy upon the part of the promoters of the scheme directed towards a body which possesses, and no doubt will not hesitate to use if it see fit, the right of veto. It may, however, be consistent with the intention of first squaring all outside claimants, and then having thus cornered Convocation endeavour to compel its reluctant submission. Meanwhile opposition to the wholesale dissolution of the University is growing apace; arts and science and law graduates, who have no interest to serve save that of "the promotion of regular and liberal education throughout Her Majesty's dominions," are not slow to recognise the tendency of the new scheme to destroy the unity and high standard and independent character of our pass examinations. I ask permission to add a few criticisms upon the medical aspect of the scheme.

The Fellows of the Royal College of Physicians and the Council of the Royal College of Surgeons have approved the scheme. The former body, not, however, without the defection of a minority, appear to have swallowed their objection of last year to the delegation of the control of examinations by the Senate to a body partly outside itself. The Council of the College of Surgeons, without consulting the Fellows, in accordance with the newly recognised power, and the expressed desire of some of its number, appear to have approved without division the new scheme, with which, according to the chairman of their committee on the subject, his colleagues were very imperfectly acquainted.

Let us follow a hypothetical medical student's career through the curriculum which the new scheme implies, up to the coveted M.D. London. First of all, if procession to the preliminary scientific is to be conditional on matriculation, or what is to serve as its substitute, his *paterfamilias* will be wise in sending him to University, or King's, or some other constituent college in arts and science, with which an arrangement has been come to under Clause 46 for a modified matriculation. If he go to one of the other medical constituent colleges, or, if a woman, to the School of Medicine for Women, then the ordinary matriculation must be encountered. Now either the matriculation is to remain what it is, or it is to be lowered probably to the level of the College of Preceptors examination in arts. If it is to remain what it is, medical students will remain where they are, with the first gate remaining shut except to a better few, or they will drift into constituent colleges with an arts faculty and a modified matriculation; if the matriculation is to be lowered for medical students, and presumably then for all, it would save a great deal of misconception and mistrust by candidly saying so. Next, an undergraduate will come up for the preliminary scientific with its 50 per cent. of rejections. If he be a University or King's man he may take their collegiate intermediate B.Sc., perhaps, in lieu of this; if not, then under pressure from the corporations and medical colleges, anxious to prevent an exodus to Scotland, down will come the standard of the preliminary scientific. The intermediate and pass M.B. examinations, as conducted under Clause 47, must tend to simulate the ordinary examination for the M.R.C.S. and L.R.C.P., and will present little difficulty.

Even then the new "M.B. London" will find his heart's desire of the doctorate unsatisfied. The admonition of the University against M.B.'s assuming that title will disturb his conscience. The M.D. is to remain "under the absolute control of the University," for which may be read, under the control of the Standing Committee in Medicine, with its ten out of nineteen members representing the two London medical Colleges and English teaching bodies. Now, it is common knowledge that the demand for the title of "Dr." has filled the sails of the agitation for the Teaching University and carried it along. Will those teachers who have urged this popular demand rest content with this stoppage just short of the promised land? Of course they will not; they would be foolish if they did. Logic and psychology and mental physiology will be thrown to the winds, and the M.D. London of the future will exhibit only slight histological differences from the M.R.C.S. and L.R.C.P. All this is very sad, and comes of attempting the impossible—of incorporating metropolitan teaching colleges into a cosmopolitan examining university. Even the Vice-Chancellor, Sir James Paget, would appear not to have foreseen this inevitable result when in May, 1886, he assured the assembled graduates and undergraduates that "he was not one of those who advocated the lowering of the standard of excellence of the University; it was not proposed to interfere with the working of the University; it was proposed to add something better rather than create something different, and *it would certainly not tend to lower the standard in any one degree*"; nor the Chancellor, Lord Granville, when in 1887, amid loud cheers, he declared "*the high character of our degrees will be maintained.*" Sir Philip Magnus not so very long ago waxed eloquent over the "undue and preponderating influence" of the teachers, and the consequently imperilled standard of examination, as well as

over the rights of Convocation as distinguished from outside bodies. Surely he cannot give a tacit assent to this scheme. Anyway, a committee of Convocation is organising opposition to the scheme, and either the honorary secretaries or myself will be glad to hear from any medical graduate who will join this committee.

I am, Sirs, yours faithfully,

W. J. COLLINS, M.S., M.D., B.Sc.

1, Albert-terrace, Regent's Park, March 1st, 1891.

P.S.—Since writing the above I have received from the University a "memorandum in explanation of the scheme for the reorganisation of the University," which, unlike the scheme itself, is not "confidential." This *pièce justicative* is presumably intended to anticipate objections on the part of Convocation. As, in dealing with the medical degrees, it states that the Royal Colleges and medical schools are solicitous of maintaining the standard and scientific character of these degrees, one can only conclude that the author of the document is a guileless innocent or a lawyer expert in compromise and totally ignorant of "the medical grievance."

TREATMENT OF CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—The statements made by Dr. Herman and others on the one hand, and Dr. Cullingworth, Dr. Bantock, and myself and others to the contrary, are so widely discrepant that it will be the wisest plan for all concerned, particularly for the sake of suffering women, that some inquiry be made as to what is the cause of the misunderstanding. By strict logical analysis of the statements, it becomes perfectly evident that one factor has not been properly estimated—that is, what may be called the personal equation. The one statement is to the effect that chronic inflammatory diseases of the uterine appendages in the majority of instances get well, and without any kind of surgical treatment. The statement, on the other hand, is that they rarely do get well, and my own conviction is that the exception is so remarkable that it may almost be discounted entirely. From these diverse statements of the case it must be perfectly evident that we are not speaking of the same thing, and that what Dr. Herman calls chronic inflammation of the uterine appendages, I certainly should not dignify by that term. Those of us engaged in the surgical treatment of these cases verify our diagnosis and justify our treatment of these cases by the display of the preparations, and these preparations indicate conditions of the disease which put the matter of diagnosis, at any rate, altogether beyond the question, whatever may be thought concerning the treatment. It is not so with Dr. Herman and his school, for they have so far presented no confirmation whatever of their assertions. The personal equation element then of the difficulty is that Dr. Herman does not diagnose as cases of chronic inflammatory disease of the uterine appendages those cases which we do; whereas we, on the contrary, disregard as altogether too trifling the class of cases which Dr. Herman considers to be deserving of that name. Such is my own explanation.

Personally, I see a very large number of cases which belong to the same group entirely as those of which I believe Dr. Herman is speaking, and they uniformly get well; but I never speak of these cases as coming within the category of chronic inflammatory disease of the uterine appendages. It rests with Dr. Herman to let us see some of the cases, as he understands them, in their initial stage, so that we may discover if possible where the misunderstanding lies. In fact, I do not think it would be at all a difficult matter to place a real value upon this personal equation. An experiment of a somewhat rough, but quite satisfactory, kind would settle the point. Let the two diverse schools of opinions be represented by two such persons as Dr. Herman and myself. Let Dr. Herman or anyone else of his school select a number of cases, say, twelve or twenty, or even a hundred, of what they call "chronic inflammatory disease of the uterine appendages." Let them be examined by the other representative person, say, by myself, and concerning each case on a particular date written opinions giving diagnosis and prognosis by Dr. Herman and myself shall be placed together in a sealed envelope, neither knowing what the other has written. This envelope shall be placed in the custody of a third person to be selected by the two. After an interval of six months or twelve months, or any time which may be agreed upon in any particular case, a second examination of the patient is to be made and similar written opinions concerning the diagnosis and prognosis shall be made by each of the observers, unknown in every instance to the other. An analysis shall then be made by the third person of each group of cases, and these shall be contrasted by the results to be ascertained by the person in whose custody the envelopes have been placed. The cases would always fall inevitably into two groups: those that had got well and those that had not, and the value of the personal equation will be determined, by one factor alone, upon which side the prognosis of recovery or the prognosis of non-recovery falls with the greater certainty. So far as my opinion goes, the treatment of either case is a matter of relative indifference so long as rest in bed during the menstrual period is made obligatory.

A personal equation of another kind seems inevitably to step in the moment the operation of removal of the uterine appendages comes to be discussed, and that has been very well illustrated in the case of Dr. William Duncan, whose critics have desired to show that he has had an improper because disproportionate number of cases of removal of the uterine appendages not affected by large cystic disease, as compared with those in which this large cystic disease had occurred, as if the two classes of cases had a constant relation to one another. Such an assumption is perfectly preposterous. The Middlesex Hospital has had for a very long time a number of beds devoted to cancerous diseases, and therefore cancerous cases have been attracted to that institution for very many years. It is more than likely, therefore, that the *clientèle* of the Middlesex Hospital will have a larger proportion of cases of malignant disease in it than will have the London Hospital, where there is no such special provision, and where the population is, on the other hand, subject to a disproportionate number of accidents. Any institution which had existed for nearly a generation, such as the Samaritan Hospital, with a large reputation for dealing with ovarian tumours, will have a disproportionate number of tumour cases, and so on indefinitely. A number of qualifying incidents can be exposed which would render a constant relation of any two classes of cases in any one experience, either hospital or individual, equally improbable. Such relation must depend largely upon reputation and upon other surrounding circumstances, many of which are quite inscrutable.

I am, Sirs, yours truly,

Birmingham, Feb. 25th, 1891. LAWSON TAIT.

THE FACTORY ACT AND CERTIFYING SURGEONS.

To the Editors of THE LANCET.

SIRS,—Kindly permit me briefly to supplement my letter of last week. The position of certifying factory surgeons was admirably defended by Sir Lyon Playfair, Sir F. Milner, and by many other members who followed, in the late debate in the House of Commons, and our thanks are due to them for their advocacy of our cause. But none of the speakers insisted sufficiently on one important point. It was argued that there was no reason for the existence of certifying surgeons, because there was little or nothing for them to do and their occupation was gone. It was stated that unhealthy "young persons" seldom or never presented themselves for examination or employment. This statement was by no means conclusively proved; but if true, why do the unfit decline to offer themselves? That is a crucial point, and one to which I wish to draw especial attention: plainly and clearly because employers and employed knew and know that it would be useless to do so in face of a law which requires a certificate not only of age but of health and fitness from a medical man. Abolish that deterrent influence, and as surely as night follows day you will behold a recurrence of the evils which that influence overcame and which it keeps so efficiently in check.

I am, Sirs, yours faithfully,

March 3rd, 1891. MALLEUS INJUSTITIÆ.

NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Would you allow me to endeavour to elicit through your columns the opinion of the profession on the following:

The general adoption of the Notification of Infectious

Diseases Act is bringing prominently forward in many localities the question of the provision of isolation hospitals. Practically the three diseases with which such hospitals everywhere will be expected to be prepared to deal at all times are scarlet fever, diphtheria, and typhoid fever, with possible outbreaks of small-pox and typhus. Without further reference to the two latter diseases, which could be regarded as exceptional emergencies to be dealt with accordingly, and admitting that typhoid fever may be safely treated in the same building with scarlet fever and *vice versâ* (although within the last few days I have seen a patient with typhoid fever, exposed very slightly to the infection of scarlet fever, contract that disease in a typical form), I would ask, Is it prudent and in accordance with what we would wish to have done in the case of our own children that scarlet fever patients should be received in the same building with diphtheria patients? I am assuming the case, not of a large hospital with detached blocks, but of a small hospital with an administrative staff necessarily more or less in common, and where precise and scientific isolation of one disease from the other could not be depended upon. It has long been a matter of observation with myself, and doubtless with others, that, given the presence of infection, however slight, nothing predisposes so much to the incidence of diphtheria as an inflamed and congested condition of the mucous membrane of the throat, and this fact has been demonstrated in France by experiments on the lower animals. Such a condition of throat is almost invariable in cases of scarlet fever, and as no one would think of introducing a case of erysipelas into a lying-in hospital, the question arises, Is there not a somewhat analogous connexion between diphtheria and scarlet fever?

I am, Sirs, yours truly,

Shrewsbury, Feb. 25th, 1891. W. N. THURSFIELD, M.D.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—My experience agrees with those who have found dental disease the most frequent cause of this complaint. It is rare to detect it without caries of the corresponding teeth, whilst it is not unusual to have it developed without intra-nasal disease other than what may fairly be attributed to irritation of the nasal mucous membrane by the septic discharge from the antrum. In treating this disease it is a mistake to suppose that extraction of teeth and perforation and washings out of the antrum, with or without the insertion of a tube, are likely to lead to a speedy cure. These steps may suffice in very recent instances; but in the long-standing cases, which constitute the majority, other measures are necessary. The mucous membrane of the antrum ought to be thoroughly curetted,[1] and, after the sloughs and débris have been washed away, should be acted on by dry boric acid, applied by insufflation. Let anyone who has opened an antrum and finds the discharge of pus continue try the effects of these measures, and he will be surprised and delighted at the immediate result. After perforation, and in spite of frequent washings out, these cases frequently drag on for prolonged periods, and become sources of disappointment both to the patient and the practitioner. The application of the curette, which may be repeated if necessary, is rapidly followed by a healthy action and loss of pyogenic functions of the antral lining membrane. To admit of the carrying out of these procedures the tube inserted ought to have a wider bore than is usually the case. Some German surgeons say that it ought to be able to admit the little finger, but I think this is not necessary. The tube I am in the habit of using is about half that calibre. I may add that my dental colleague, Mr. G. W. Watson, who has rendered me valuable aid in the treatment of many cases of antral empyema, shares the above views.

I am, Sirs, yours obediently,

Edinburgh, Feb. 24th, 1891. G. HUNTER MACKENZIE.

INFLUENZA IN THE HINDU KHUSH.

To the Editors of THE LANCET.

SIRS,—You may be interested in hearing of the prevalence of this disease among the valleys of these mountains at the present time. Here, at Gilgit (4800 ft. above the sea), which is in the extreme north-west of Kashmir territory, the epidemic first made its appearance about Dec. 1st, having been brought by a party of Mussulman priests coming from Chitral, a country twenty marches (about 200 miles) west of this, where we have news of its prevalence. I cannot obtain information of its more remote origin, though the inference is that it is the dregs of the epidemic which appeared in India in the early part of this year, and did not at the time spread to these remote districts. The probability of its spreading to Kashmir and India is small, owing to communication with these being almost cut off by snow on the passes. The symptoms are pretty typical; the bronchial catarrh is well-marked and the coryza often absent, while pain over the frontal sinuses, with or without coryza, is pretty common. The temperature is high, often over 103°, and the course of the disease apt to be prolonged owing to the resuscitation of dormant malaria; the latter prevailing in these valleys even up to 7000 ft. above the sea. The winter season of these parts is characterised by cold, bright weather, frost at night, a slight snowfall in the valleys, where it lies above 5000 ft., and a great deal of snow on the peaks above. Lying beyond the influence of the monsoon, the Hindu Khush valleys are practically rainless, and dependent on the melting snows for their water-supply. The streams derived from this source are utilised for irrigation purposes; hence, in autumn, after the burning heat of June, July, and August (maximum 96°), the soil is laden with malaria, and fever is very prevalent.

I am, Sirs, yours truly,

J. R. ROBERTS, F.R.C.S. Eng.,

Gilgit, Kashmir, Dec. 28th, 1890. Ind. Med. Service.

[1] For this purpose I have used an antral curette, made at my suggestion by Mr. Watson, dental surgeon.

THE BORIC ACID TREATMENT OF GRANULAR LIDS.

To the Editors of THE LANCET.

SIRS,—Although I had some years ago given a trial to (and abandoned as useless) powdered boric acid in the treatment of granular lids, it was not until I read Mr. Beaumont's paper in THE LANCET of October 18th, 1890, that I tried what effect boric acid in conjunction with "massage" would produce in cases of this class. Mr. Beaumont, it may be remembered, advised that the boric acid powder should be dusted over the conjunctiva of the everted lids, and then well rubbed into the membrane (the so-called "massage") by the pulp of the forefinger for five or ten seconds. In support of this treatment, he cited three cases of trachoma which had received benefit; two of these cases were under treatment for a fortnight, the third for a month. I can corroborate Mr. Beaumont's statement that after one or two applications a tolerance on the part of the patient becomes established, and the boric powder certainly causes less pain than that which results from the employment of the usual remedies (cupric sulphate, silver nitrate, carbolic acid, &c.) to the conjunctiva. *Primâ facie* this treatment (and its theory of action) appeared to be so reasonable as to justify me in adopting it; and, with a view to test for myself its value, I selected eight cases of granular lids for experiment. In the selected cases the powder was applied in the manner recommended by Mr. Beaumont, the application being made once daily. The treatment was continued for four months in two cases, for three months in four cases, and for ten weeks and one month respectively in the last two cases. The changes present in the selected cases may be epitomised by saying that the palpebral conjunctiva was thickened and unduly red, and that small vesicular grains were present in the outer part of the lower lids, in the superior fornices, and along the fornical borders of the upper lids; the discharge amounted only to a little "gumming" together of the eyelids first thing in the mornings. They were, in fact, examples of what many surgeons call "follicular conjunctivitis." These cases were selected as appearing to me peculiarly appropriate for the use of a comparatively mild agent like boric acid, more especially, perhaps, since they seemed hardly serious enough to call for the use of stronger remedies. What was the result of the experiment? Five cases remained *in statu quo*, neither the anatomical appearance of the lids nor the amount of discharge being altered in any way. One child (after treatment for four months) had the discharge lessened; in another child the redness of the lids was somewhat reduced. In the eighth case, which deserves special mention since, together with the boric acid, hydronaphthol ointment was being used, some of the grains disappeared, the lids, however, remaining thickened and

congested. And I may at once say that this was the only case in which the grains were influenced in any way. It will be seen, therefore, that in my hands at least this treatment has given what amounts practically to a negative result.—I am, Sirs, yours truly,

SYDNEY STEPHENSON, M.B., F.R.C.S.Edin.

Central London School, Hanwell, Feb. 23rd, 1891.

ENGLISH MEDICAL PRACTICE IN FRANCE.

To the Editors of THE LANCET.

SIRS,—The facts shown in my friend's (Dr. Barnard) letter, in your issue of Feb. 21st, deserve consideration, as the interests of practitioners abroad are not so much at stake as those of the great mass of travelling English and Americans on the Continent. It would be well for all persons visiting Europe to obtain first the address of competent professional men before leaving home, as it can be stated as a fact that local advice is not always disinterested. Indeed, it is positive that most of the professional people recommended by servants, couriers, *concierges*, hotel-keepers, and chemists have to pay a commission to these people for the clients obtained, and, like the well-known 5 per cent., or *sou per franc*, given by commercial people in France to our servants, we can be sure it comes on our bills and not out of their pockets. These abuses are so well known now that people who settle in France put up with them like the *pourboire*, as a necessary evil, but they limit it as much as they can. It would be well if all persons who need a doctor abroad could first of all inquire as to the standing of anyone recommended of their consul or clergyman, and others, but many (indeed most hotel patients) are those who are taken suddenly ill, and who perforce must accept the hotel doctor, for the moment. If we were to put into print the really outrageous things that have happened and the charges made it would take too much of your space, but to hasten on the remedy proposed by Dr. Barnard it ought to be accepted for the special reasons given. It might be possible also to induce hotel-keepers and chemists to keep a framed list of the members of the Anglo-American Continental Medical Society, which includes most of the English and American doctors who are legally entitled to practise abroad. Hoping that some practical solution may be found to stop the present abuse,

I am, Sirs, your obedient servant,

Nice, Feb. 23rd, 1891. THOMAS LINN.

THE USE OF NITROUS OXIDE BOTTLES IN THE HORIZONTAL POSITION.

To the Editors of THE LANCET.

SIRS,—Dr. Sheppard has called attention in THE LANCET of Feb. 21st to some very practical points of embarrassment that are liable to occur at times with the supply of gas from horizontally placed bottles. My experience with the improved pedal attachment leads me to assert that it is unaccompanied by such objections. As the valve ends of the bottles are on a slightly higher level than the opposite ends, it is possible the aperture of exit of the gas is just above the level of the liquid nitrous oxide. The supply of gas is never fitful and irregular with it, but, on the contrary, can be regulated with the utmost facility. The screw is certainly liable to "set" in any bottle, but this can never be a source of inconvenience during the administration when the improved pedal attachment is used, for the reason that it is turned on at the commencement of the operation, the escape of gas being then controlled by the pedal screw valve.

I am, Sirs, yours truly,

PERCY EDGELOW,

Anæsthetist to the National Dental Hospital.

Old Burlington-street, W., Feb. 21st, 1891.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary and Owens College.

THE negotiations which have for some time been going on between these two bodies respecting the provision of increased hospital accommodation appear to make but little progress, and at present matters are almost at a deadlock. A conference held on the 17th ult. between the Infirmary and College authorities ended without anything definite being done, and the matter is further adjourned to consider certain suggestions made by Dr. Renaud. To all who have any intimate knowledge of either institution it is an open secret that there is a feeling of rivalry between certain sections of the two bodies which, unless some more cordial relations be established, augurs rather badly for an amicable settlement of the questions now in dispute. Shortly put, the position of affairs at present is this: The College wishes to have a more direct share in the control of the clinical instruction which must be given to the medical students, and they are desirous of having a new hospital erected on the site they now have for the purpose, whilst the infirmary authorities are unwilling to enter into any arrangements to forward such a scheme, but prefer to extend the present building in Piccadilly. It is admitted that some additional hospital accommodation is wanted, and will be still more wanted in a few years. The question in dispute is how and where it shall be provided. So far the public at large has scarcely been approached in the matter, but it is not unlikely that public opinion, as expressed through the general body of subscribers to the infirmary, will be averse to any further extension of the present building or the covering of any more of what is left of the open space around the infirmary.

Licensing Reform.

Important public meetings have recently been held "to unite in immediate practical efforts all those who are interested in the moral and social well-being of the people," with a view to obtain some speedy reform in our licensing system. The conferences were presided over by the Bishop of Manchester, and, as usual when the "drink question" is discussed, a wide divergence of opinion was found to exist as to the best practical steps to be taken to forward the ends which all had at heart. So keen was this divergence that at one time it seemed as though the present efforts would end in nothing, but at the last meeting (held on the 26th ult.) a series of resolutions were arrived at which may be briefly put as providing (1) for the extinction of all licences within seven years from the passing of a Bill; (2) licences to be granted only according to a fixed ratio of the population; (3) three-fourths of the inhabitants of a licensing district to have the power to veto all licences, and the licences to be granted only by representative bodies. A Bill upon these lines is to be promoted in Parliament.

Provident Dispensaries.

At the annual meeting of the Provident Dispensaries it was stated that there are at present 24,000 members. The receipts from members amounted to £4107, and the sum total paid to the medical staff, exclusive of confinement fees, was £2372. Eight of the nine branches are now self-supporting. The only disquieting reflection upon this report is whether any, and, if so, how many, of the above 24,000 members are in such position as to pay the ordinary fees of the general practitioner?—for complaints are still at times heard that persons are allowed to become members without sufficient inquiry as to their means and income.

The Workhouse Infirmaries.

It was recently noted in these columns that Dr. Reynolds had been appointed visiting physician to the Crumpsall Infirmary. This week another old infirmary "resident," Mr. Milner, has been appointed to a similar appointment at the Hope Hospital, belonging to the Salford guardians. Another vacancy has been caused at Crumpsall by the resignation of Mr. Hardie, who for many years has been visiting medical officer there. A singular item is down on the agenda for the next meeting of the City Council—i.e., the infirmary is to be told that in the opinion of the Council patients are not to be taken into the fever hospital from districts outside the city. As well might the districts outside the city who use the hospital in common with the corporation tell the infirmary that they consider the city authorities should no longer use the hospital, but provide one for itself and leave the present one for their exclusive benefit. A very fitting reply from the infirmary would be that if the corporation is not satisfied with the manner in which the hospital has hitherto been conducted and managed, they had better enter into negotiations for having it transferred to them, as at present the infirmary burdens itself with the care of a large infectious hospital—

a business which is rightly none of theirs, but of the health authority of the district.

It is with much satisfaction one has to record that at last the corporation has provided a proper and more decent coroner's court than the stuffy, dingy room in John-street that has done duty, to the discomfort of all who have had to attend there for many years past.

The amounts collected on Hospital Sunday at present received are £4700, a slight increase over last year, when it reached only £4636. The Saturday collections are £3095, a falling off compared with last year's £3536. It is hoped, however, when all the collections have been sent in, the total may not be below the preceding year.

Manchester, March 3rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Pauperism in the North.

AT a late meeting of the Newcastle guardians, Mr. Knollys, Local Government inspector, brought forward some interesting statistics as to pauperism in the northern district, which included forty-four unions, practically Northumberland, Durham, the North Riding of Yorkshire, and two unions in Cumberland. At the end of 1884, when trade depression was about at its deepest, there were in the district 47,217 paupers, and at the end of 1888 there were 39,549, which was satisfactory, considering the severe winter which ended the year. The number of vagrants too had been reduced from 129,219 in 1888 to 86,000 in 1890. Mr. Knollys seemed to think that this reduction had resulted from improved administration, as the vagrants knew that they could not now get a good night's lodging without a good day's work being required from them in return.

Newcastle Surgical Aid Society.

The annual meeting of this young but useful Society has been held, and from its annual report, read by Dr. Arnison, it appeared to have supplied invalids of the poor and deserving classes with appliances of a most useful character. The Society, however, deserves better support from the general public, for it was shown in the report that but for the considerable sums contributed by the patients the funds would have been entirely absorbed.

The Sanitary State of Middlesbrough.

The medical officer of Middlesbrough reported to the sanitary committee that the total deaths were 215, giving a mortality for the month at the rate of 33·50 per 1000 per annum. The high death-rate was attributable to two causes—viz., first, all the deaths arising from the unprecedented severity of the weather at the beginning of the year fell within this month. This was shown, he said, by the deaths from diseases of the respiratory organs, and also by the number of deaths among infants and very old persons from extreme cold. The second cause of death was typhoid fever. The renewed outbreak of this disease, whilst not giving so many cases, was of a rather more fatal character. He also stated that the typhoid fever epidemic was gradually diminishing.

St. John Ambulance Work at Durham.

The ambulance class which was commenced at the Durham Railway Station towards the beginning of the year has been examined by Surgeon-Major Hutton, and forty-two received certificates of proficiency. The class was instructed by Dr. Jepson, who was complimented by Surgeon-Major Hutton on its knowledge of ambulance work.

The late Mr. John Fleming's Bequests.

It is stated that the whole of the charitable legacies left by the late Mr. John Fleming, solicitor, of this city, have now been paid over. Mr. Fleming, it may be remembered, died in February last year, and I noted the various charities benefited by his will in a former letter. The legacies amounted in the aggregate to £66,500, and this very large sum has been paid free of duty.

Newcastle-on-Tyne, March 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Edinburgh Public Health Committee.

AT a meeting of this committee last week it was reported that there were 274 patients in the city hospitals under treatment for infectious diseases, of whom 130 were cases of scarlet fever and 80 of typhoid fever. Arrangements have, it was stated, been made for giving a course of lectures to the nursing staff of the hospital. The drains in the vicinity of St. Bernard's Well are also being overhauled to settle the question, which from official statements were regarded as settled some time ago, whether the well is being contaminated or not by sewage.

Disposal of Edinburgh Refuse.

It has been intimated here that it was proposed to erect destructors in different districts of the city, and it is understood that these proposals are assuming practical shape, and that steps are being taken to acquire ground on which to erect them.

Royal Society of Edinburgh.

At the meeting of this Society on Monday, under the presidency of Sir Douglas Maclagan, Dr. A. Bruce made a communication on a case of Human Cyclopia, and Dr. Byrom Bramwell gave particulars of several cases illustrating the position of the visual centre in man.

Health of Edinburgh.

The mortality last week was 118, making the death-rate 22 per 1000. Diseases of the chest accounted for 50 deaths, and zymotic diseases for 15, of which 9 were due to whooping-cough and 3 to typhoid fever. The intimations for the week comprised—typhoid fever 29, diphtheria 6, scarlatina 27, and measles 40.

GLASGOW.

University Court.

At a meeting of this court held last week the following examiners in medicine were appointed, the appointment being in each case for four years:—In Materia Medica, Mr. Ralph Stockman, M.D., F.R.C.P.Edin., &c., Edinburgh; in Chemistry, Mr. John Millar Thomson, F.R.S.Edin., &c., Professor of Chemistry, King's College, London; in Zoology, Mr. D'Arcy W. Thomson, B.A., Professor of Zoology, University College, Dundee; in Botany, Mr. George Murray, B.Sc., presently Examiner in Botany in the University; in Clinical Medicine, Dr. Ebenezer Duncan, M.D., Crosshill Professor in Anderson's College Medical School; in Clinical Surgery, Dr. A. Ernest Maylard, B.S., M.B. Glasgow. It is worthy of note that only one of these six gentlemen is a graduate of Glasgow University. Dr. E. Duncan has resigned his professorship in Anderson's College.

Loch Katrine Water and Tapeworm.

There have been at various times serious scares regarding the use of the matchless water-supply of Glasgow from Loch Katrine. At first it was said that the water was too soft and would give rise to rickets, but the fear of this has evaporated. Then it was the risk of contamination of the water by the inevitable discharges from the small steamers which ply on the loch in summer, but that, so far as is known, has led to no evil results. The most recent scare has arisen over the statement that the trout in Loch Katrine suffer very much from tapeworm, but the very unsavoury suggestion which this implies has been shown to be groundless by an investigation made by Professor Young and Dr. J. B. Russell, who find that, though the trout do undoubtedly suffer as stated, there is no risk so far as the propagation of tapeworm is concerned. Cases of tapeworm are certainly not more common in Glasgow than elsewhere; in fact, there is reason to believe they are rarer in Glasgow than in the country.

March 5th.

DISPOSAL OF REFUSE IN BRUSSELS.—The special commission appointed to report on the disposal of the refuse of Brussels has recommended the adoption of the Leeds system of destruction by fire. The furnaces will be situated in the vicinity of the city, but, except in times of epidemic disease, it is not proposed to burn the whole of the refuse.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Address to Mr. W. J. Wheeler, F.R.C.S.

MR. WHEELER was last week presented with an illuminated address by the nurses of the City of Dublin Nursing Institution on his resigning the position of honorary secretary to that institution, expressing regret at his retirement, and gratitude for the impartial and kindly care and energy he had bestowed upon all that concerned their welfare. Mr. Wheeler, in replying, expressed his appreciation of the intelligence and efficiency with which the lady manager and nurses had carried on their arduous and useful work, and said that he would always take a keen interest in their welfare and individual prosperity.

National Eye and Ear Infirmary.

The committee, in their annual report, state that about a year since it was intended reflooring some of the wards and effecting other improvements, but, as it was found that more extensive changes were demanded, they were not carried out. The institution at present contains thirty beds, and the committee wish to enlarge it so as to provide at least double that number, and it is estimated that a sum of £7000 will be required. The union of St. Mark's Ophthalmic Hospital and the Eye Infirmary under contemplation means an outlay of a very considerable sum for the building of a proper hospital to contain 120 beds, and if it is to be carried out the public must contribute liberally.

Strange Freak of a Lunatic.

Insane people, it is well known, occasionally swallow foreign bodies, and a case in point occurred last week in the Cork Asylum, where an inmate of that institution had impacted in his throat several pieces of wood and a large stone. An operation removed the obstruction, but the patient died shortly afterwards during an attack of acute mania.

Fever in Cork.

The small number—thirty-three—of admissions last year to the Cork Fever Hospital is a fact worthy of special notice. During the last quarter there were only four cases of typhus admitted, a period of the year which usually shows the largest amount of sickness. There were fifty-three admissions during the year of enteric fever cases. A pure supply of water would undoubtedly greatly diminish the prevalence of this fever, as the river which supplies the city at present is contaminated along its banks, and cannot properly be supervised. It is satisfactory to learn that a registration of plumbers has been started in the city, and that domestic drainage will be carefully attended to.

Several cases of small-pox are reported to have occurred in the Magherafelt Union.

BELFAST.

The Sanitation of Belfast.

On Monday last a deputation from the Ulster Medical Society, consisting of the President (Dr. Dempsey), Dr. O'Neill, and Dr. Lewers, appeared before the corporation of Belfast, at the usual monthly meeting, to lay their views before the members in reference to the necessity of increased sanitary precautions. Dr. Dempsey, in his statement, said they were of opinion the death-rate of Belfast was too high. He thought, when the new drainage scheme came into operation, it would have a good effect, but they believed this effect would be much increased by the more frequent removal of accumulations of filth from the rear of their buildings. He thought the by-laws recently enacted were excellent, but one of them, he pointed out, had no scientific basis—that was the one which provided for the covering of ashpits. The death-rate of Belfast was 25·5 per 1000; that of Birmingham was 19 per 1000. If the mortality in Belfast could be reduced to that of Birmingham, the saving of human life would be 1500 persons annually. Dr. O'Neill pointed out how the system of the frequent removal of filth had in Edinburgh, Rochdale, and Birmingham led to a distinct lowering of the death-rate. After Dr. Lewers had spoken, the Mayor, in very courteous terms, thanked the deputation, and said he was sure their visit would prove profitable to the corporation. In reply, Dr. Dempsey urged the necessity of providing a steam steriliser for disinfecting the clothes of persons suffering from infectious diseases.

Public Health Committee.

In the report presented to the City Council attention was drawn to a memorandum drawn up by Dr. Torrens (Dispensary Medical Officer) in reference to the insanitary state of certain streets in his district, and it was stated rules had been made to obviate this in the future. Every precaution had been taken to prevent the spread of small-pox.

Proposed Hospital for Infectious Diseases.

In connexion with the recent outbreak of small-pox in Belfast, the necessity for an infectious hospital for non-pauper patients has been much felt. The Public Health Committee of the Corporation approached the Belfast Board of Guardians, suggesting that a joint committee should be appointed by the two bodies to confer on the matter, and this was strongly supported at the last meeting of the latter by Dr. Stafford, Local Government Board inspector. The guardians declined to comply with this request, on the ground that in their fever hospital there was ample accommodation for the pauper classes, there being at present 400 vacant beds there for cases of infectious disease. In reply to this it may be stated that this hospital does not meet the case of those who are not paupers and who would be willing to pay for treatment, but who would not enter a pauper ward. Further, it is urged that it is against modern scientific ideas that a fever hospital should be placed in the midst of a populous district, to the inhabitants of which, owing to their proximity to the hospital, the germs of disease might easily be spread. It was stated that when small-pox prevailed in Belfast before, it occurred to a larger extent in streets near this fever hospital than in other portions of the city. The guardians think they have to do only with the paupers, and that if an infectious hospital is to be erected for a class above the poor, the corporation have the right to do it.

March 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Danger of Unboiled Milk.

IN my own practice I have for some years been in the habit of recommending the boiling of milk as a matter of routine, epidemics of typhoid fever having been sufficiently often traced to a contaminated milk supply to warrant the adoption of this simple and efficacious precautionary measure. About a year ago the Académie de Médecine pronounced itself formally in favour of this practice. Many people, however, have a rooted objection to the taste of boiled milk, and, as a matter of fact, that liquid is generally drunk unboiled. The public will perhaps be more inclined to depart from the beaten track when they read of the following case brought to the notice of the Académie de Médecine by M. Ollivier, one of the physicians of the Hôpital des Enfants Malades. Clinicians are "moving heaven and earth" to exorcise the ogre tuberculosis, and, in our anxiety to discover an antidote for the ravages of the terrible bacillus, we are apt to forget the old adage, "Prevention is better than cure." The case related by M. Ollivier was that of a young lady aged twenty, whose family and personal health antecedents were excellent, but who had the misfortune of being brought up in a school where, in the space of a few years, six out of thirteen girls had fallen victims to tuberculosis, two being cases of tabes mesenterica. The young lady succumbed rapidly to tuberculous meningitis. An examination of the udder of the cow which had for nine years supplied the school with milk was, after death, found to be the seat of extensive tuberculous lesions. M. Nocard emphasised the contention of M. Ollivier that unboiled milk should be banned, however healthy the cow yielding it may appear, by relating how the lymphatic glands of a calf in seemingly excellent condition, which, to the great disappointment of its owner, had died after a few days' illness had been found stuffed with bacilli. A short time afterwards the mother of this calf—a fine beast, to which had been allotted numerous prizes—died in her turn, and the udders, lungs, and lymphatic glands were discovered to be tuberculous. The lesson taught by these two interesting communications is plain: avoid unboiled milk.

Chloride of Ethyl as a Local Anæsthetic.

Chloride of methyl, introduced into the domain of therapeutics as a local anæsthetising agent by Debove, has the inconvenience of being costly and cumbrous, of producing a temperature unnecessarily and sometimes hurtfully low (– 40° C.), and, finally, of being explosible. Ethyl chloride, on the other hand, possesses the advantage of being a liquid whose boiling point is 10° C., the mere heat of the hand sufficing to volatilise it, thus doing away with the necessity of the expensive apparatus in which its rival is supplied. M. Monnet of Lyons has had the happy idea of utilising this easy volatility of the ethyl chloride by keeping it for use in glass capsules similar to those in which amyl nitrite is supplied. Each capsule contains ten grammes, and the breaking of the capillary tube in which it terminates allows of the escape of the vapour generated by the heat of the hand. The vapour, directed at a distance of twenty centimetres on to the part it is desired to anæsthetise, determines a fall of temperature of – 30° C. This new agent will be found useful in such small operations as the opening of abscesses, tooth extraction, avulsion of ingrowing toe-nails, &c. It will also, it is said, allay instantaneously the pain of facial and intercostal neuralgia.

The Bill of Mortality at the Pasteur Institute.

The statistics of the years 1886–87–88–89 show that of 7893 persons bitten by rabid animals and treated at the above establishment, fifty-three died—a mortality of 0·67 per cent. If patients in whom hydrophobia declared itself after the cessation of the treatment by inoculation be counted, the mortality rises to only 1 per cent. M. Leblanc tells us that of 336 bitten persons (years 1880 to 1885) treated by cauterisations or on the old expectant plan, thirty-nine succumbed—a mortality of 12 per cent.

The Action of Koch's Liquid on the Monkey.

The effects of Koch's liquid on a quadrumanous animal so vulnerable to the invasion of the bacillus as the monkey have been investigated recently by MM. Hénocque and Capitan at the Collège de France and the Hôtel Dieu respectively. M. Hénocque informs us that when his monkey entered the laboratory (Dec. 21st, 1890) auscultation yielded no physical signs denoting phthisis. Two days after the first injection a few râles and impaired resonance were noted at the right apex. The third injection determined dulness still more marked, and, in addition, slight dulness at the left apex. From this moment all the symptoms of acute phthisis manifested themselves (cough, anorexia, debility, intense fever), and eight days later the animal died, having lost a tenth of his weight. At the necropsy four tubercular masses of the size of a big pea were discovered in the right lung, the left organ in two-thirds of its extent being the seat of caseous pneumonia. Surrounding the lesions there were zones of red hepatisation, with marked exudation of red blood-corpuscles. Two guinea-pigs have been inoculated with portions of the pneumonic tissue, and both animals now present signs of cutaneous and glandular infection. The total quantity of fluid received by the monkey was six milligrammes — a quantity apparently quite capable of determining the onset of acute phthisis. M. Capitan's results differ somewhat from those obtained by M. Hénocque. One tuberculous monkey received in ten days three inoculations of one milligramme each. Death ensued on the tenth day, no reaction having been evoked. Tubercles were discovered in the mesenteric glands, the liver, and the spleen, all containing colonies of bacilli. The only pulmonary lesion was a small mass of grey granulations surrounded by an inflamed zone, and containing a few bacilli in the anterior edge of the left lung. Another monkey, supposed to be tuberculous, has up to the present time received four milligrammes of fluid, and seems none the worse for it. No reaction whatever was excited; indeed, the temperature has been noticed to descend 0·5° C. from four to five hours after an inoculation.

Paris, March 4th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Oscar Liebreich.

PROFESSOR OSCAR LIEBREICH, whose speech at the Berlin Medical Society is justly attracting so much attention at present, is one of the most eminent of the German pharmacologists. It was by Hoppe-Seyler, a well-known master of the subject, that he was initiated into the mysteries of medical chemistry. His first publication in 1864 announced his discovery of protagon, and was a highly important contribution to the chemistry of the brain. In 1869 he showed that chloral hydrate, which Liebig had discovered thirty-six years before, was an excellent soporific. He was led to this highly important discovery by studies of the connexion between the effect of chemical substances and their chemical constitution. Under certain conditions chloral separates into chloroform and formic acid, and Liebreich showed that this separation can take place in the bodies of human beings and animals. This pregnant observation afterwards enabled Liebreich to restore ethylene chloride, trichloride of acetic acid, and butylic chloral to the pharmacopœia; it also led Kolbe to the discovery of the therapeutic value of salicylic acid. One of Liebreich's later contributions to practical medicine was the application of lanoline as a basis for ointment. He is now engaged in very important investigations. He has observed that the chemical reactions in mixtures are not equally rapid in all parts, and he deems this observation significant in connexion with the biological processes in the cells. He was born at Königsberg in 1839, and educated there and in Berlin. He left school before finishing the full curriculum, studied chemistry, travelled for two years as a sailor, studied chemistry and medicine, and graduated in 1865. In 1868 he was appointed chemical assistant in the pathological institute here, established himself as a private lecturer in 1869, and was appointed professor in 1871.

Virchow on Koch and Liebreich.

At a meeting of the city deputies of Berlin last Thursday, at which the project of erecting a convalescent home near Berlin for patients treated by Koch's method was discussed, Professor Virchow, one of whose multifarious functions is that of a city deputy, said: "Everybody knows that public opinion as regards the success of Koch's method, which had somewhat fluctuated of late, has risen again within the last few days. This is due to the presentation of Liebreich's new medicament which was published yesterday, and which has been brought forward with such an abundance of good proofs that one may safely say it is likely to do at least as much for laryngeal phthisis as Koch's medicament, perhaps somewhat more." In the same debate Dr. Strassman stated that, of the 623 patients treated in the hospitals belonging to the city of Berlin, 36 had been cured, while 306 had improved in a greater or less degree.

German Death-rates in the Week ending Feb. 14th.

Aix-la-Chapelle 23·4, Altona 31·8, Barmen 26·0, Berlin 25·4, Bremen 17·4, Breslau 25·7, Chemnitz 29·3, Cologne 24·9, Dantzic 24·9, Dresden 17·1, Dusseldorf 24·6, Elberfeld 23·6, Frankfort-on-the-Main 20·5, Hamburg (with its suburbs) 22·7, Hanover 18·5, Königsberg 24·0, Krefeld 23·8, Leipsic 16·9, Magdeburg 18·3, Munich 27·4, Nürnberg 26·4, Stettin 28·0, and Stuttgart 22·8.

Prostitution in Berlin.

The number of women under police control (including medical supervision) in Berlin in 1875 was 2140; at the end of 1890 it had risen to 4068.

Professor Koch is expected back in Berlin at Easter, and will probably travel home *viâ* Italy.

Professor von Helmholtz has received the distinction of honorary citizenship from his native town of Potsdam.

Berlin, March 1st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Visit of Professor Koch.

DR. KOCH landed at Alexandria on February 11th at 8 A.M., and an hour later was at the Arab hospital looking at the cases on which the tuberculin fluid has been used. Dr. Koch reached Cairo on the evening of Feb. 12th, looking very thin and ill after five days' sea-sickness and all its attendant evils, but the following morning he felt so much better that he insisted on going to Kasr-el-Aini Hospital, where he very good-naturedly devoted an hour and a half to seeing and talking about the cases shown to him by Messrs. Milton and Sandwith. Among some twenty cases

of lupus glands, bone disease, and phthisis there was material enough for him to teach about the manner and method of using the fluid, the increased quantities, the times for injection and for repose, and the continuance of the ordinary surgical and medical aids to recovery. He was much interested in the cases of tubercular glands of the neck, groin, axillæ, and pelvis, and was astonished to find so great a number of these cases in hospital. He warmly congratulated Mr. Milton upon the improvements in the hospital since his last visit in 1883, and was interested to find the kitchen and the pharmacy under competent German management. Later in the day he visited also the German Hospital in Cairo and saw the cases undergoing the Koch treatment. His chief criticism here, as elsewhere, was that the operators were a little too cautious and did not use sufficiently large doses of the tuberculin. Dr. Koch avoided all visits that were not absolutely necessary, and left Cairo on Feb. 14th for a fortnight's rest on the Nile. He has courteously declined to accept a dinner offered to him by the English military and civil doctors of Cairo, and only intends to spend three days here upon his return to Italy and Berlin, where he is due at the end of March to take up his new work.

Egyptian Immunity from the Exceptional Cold of January.

It is unnecessary here to refer to the cold weather lately suffered in Europe, but it may be worth while to note that the climate of Egypt has not been affected by the glacial period elsewhere. The newspapers and private accounts tell us of exceptional snow in Algiers and of six inches of snow at Tunis between Jan. 18th and 21st, occasioning the greatest misery among the Arabs, and snow clouds seem to have strayed as far as Bagdad. The December temperatures, as reckoned for invalids in Cairo, ranged from a minimum bedroom heat of 60° F. to a maximum out-door temperature in the shade of 70°. In January the average minimum in a north bedroom without artificial heat was 58°, and twice fell as low as 56°; while the maximum temperature by day in the shade varied from 59° on two days to 74° on Jan. 17th. The absolute minimum out of doors in January was 36°, and the weather for two weeks seemed as cold as it has ever been in Cairo; but this was chiefly due to the clouds obscuring the sun by day. The heat at Assouan (south of Luxor) varied in January from about 60° by night to 80° by day, with an average heat of 71°, and at Wady Halfa, which is the furthest point on the Nile to whic'. invalids travel, the January temperature has varied from 35° at night to 90° by day.

The Tourist Season.

In spite of the opening of fresh hotels and of a new line of Nile steamers, Cairo has never seemed so crowded as it is this winter. During four days last week no fewer than 500 people left the capital—250 to ascend the Nile, and of course return here later, and 250 others for Alexandria, to indulge their love of travelling, to Athens, Constantinople, and the Holy Land.

Cairo, Feb. 23rd.

Obituary.

RICHARD MIDDLEMORE, F.R.C.S.

ON March 1st, at Birmingham, Richard Middlemore, in his eighty-seventh year, broke the long chain connecting him with the past and peacefully went to his rest, full of all that should accompany age—honour, love, obedience, troops of friends. He was born on Oct. 12th, 1804, of an ancient family, whose records extend back to the time of Henry II. At the age of sixteen he was articled to a surgeon at Lichfield, subsequently becoming a dresser at St. Bartholomew's Hospital, where he also formed a friendship of a life-long character with Sir Richard Owen. Settling in Birmingham, he resolved, after mature deliberation and with the advice of his friend Joseph Hodgson, to devote himself to ophthalmic work exclusively; afterwards he was appointed assistant surgeon to the Birmingham and Midland Eye Hospital, and in 1835 honorary surgeon, which post he held until 1849, when he joined the consulting staff. He obtained the Jacksonian prize for his essay entitled "A Dissertation on the Diseases of the Eye and its Appendages, and the treatment of them," which was embodied subsequently into his well-known work, a "Treatise upon Diseases of the Eye." His enthusiasm and energy in all matters relating to the branch of which he was such an able exponent gave an impulse to his philanthropy, and stimulated others in the cause of which he was so interested. Thus the Asylum for the Blind at Edgbaston came to be founded, and received the benefits of his fostering care and services. In 1889 his undiminished zeal for this institution led him to give £2000 for the purpose of founding a trust fund for assisting poor deserving blind persons who shall have been inmates of the said institution by making grants to them on leaving, so as to enable them to earn their living by honest industry. In 1877 he also founded a prize to be awarded by the Council of the British Medical Association triennially "for the best essay on the scientific and practical value of improvements in ophthalmic medicine and surgery made or published during the previous three years." In 1888 he made a gift of £1000 to the Birmingham and Midland Eye Hospital to pay for the delivery of an annual lecture or a short course of post-graduate lectures, to be open to all recognised practitioners, on some subject or subjects connected with ophthalmic science and practice. Thus for fifty years he displayed a keen and devoted loyalty to his calling, and enriched its records with assiduity and experience of an unusual career. High-minded and honourable in character, with instincts true and unselfish, he gathered during his long life friends around him who now lament his death and look back with satisfaction upon his friendship with peculiar gratification. His memory remains as an unsullied example of an honest and useful life, and as a type of a Christian and a gentleman.

Medical News.

GUY'S HOSPITAL.—Mr. Edward Cock, senior consulting surgeon to this hospital, has sent a donation of £50 to the College library.

BATH EYE INFIRMARY.—The annual report (the 79th), just circulated, gives a favourable record of the condition and working of this institution during the year 1890, the first year, since entering on its new premises. There has been a marked increase of applications for treatment compared with the previous twelve months. The number of in- and out-patients shows an increase of 62 and of 120 respectively. The receipts from all sources (including a balance of £288 1*s.* 8*d.* brought forward from 1889) amounted to £999 0*s.* 6*d.*, and the disbursements to £470 12*s.* 1*d.*

THE LONDON CONFERENCE ON THE HOUSING OF THE WORKING CLASSES ACT.—The Special Committee on Defects in Houses appointed to prepare for the consideration of the conference a list or schedule of the conditions or defects which may be considered to render a house "so dangerous or injurious to health as to be unfit for human habitation" within the meaning of the Housing of the Working Classes Act held their first meeting at the Paddington Vestry Hall on Tuesday last. On the motion of Mr. Judge, Dr. T. Orme Dudfield was elected chairman of the committee. The committee sat for nearly three hours and almost completed their draft report, which will be finally revised at a meeting to be held on Monday next, so as to be ready for the meeting of the conference fixed for Friday, March 13th.

DIPLOMA OF PUBLIC HEALTH.—The University of Cambridge has instituted a course of practical instruction in connexion with the requirements of the medical officers of health diploma. It includes the sanitary examination of water, air, and foods chemically and microscopically, the laws of heat, pneumatics, hydrostatics, and hydraulics. It further includes the preparation of different media used in the cultivation of micro-organisms. Short lectures will be given in explanation of the above subjects, and of analytical reports in general relating to water, air, and foods, and the interpretations to be put upon them. In addition to the six months' course, there will be a shorter one, beginning on July 8th, 1891, and ending in the last week of August. In the long vacation Professor Roy will lecture on Bacteriology thrice weekly, beginning on July 8th, for a period of six weeks.

YELLOW FEVER IN WEST AFRICA.—A report from St. Louis announces that yellow fever is raging in the Cameroons and at the mouth of the Niger, and that grave fears are entertained of an outbreak at St. Louis.

THE ANIMALS' INSTITUTE.—At the Congress which was announced to take place at the Animals' Institute with relation to horse traffic, the committee decided to offer prizes for the best essay on draught (accompanied with models), and also for any improvements in appliances used for horse traction on the London streets.

CENTENARIANS.—Mrs. Kilham, of Mexborough, near Sheffield, celebrated her 103rd birthday on Monday.—Captain A. C. Littleton, R.N., of Cross Hayes, Hoar Cross, Burton-on-Trent, writes to a contemporary that there still lives at Armitage village, near Rugeley, an old man who entered his 104th year on Jan. 6th.—William Adam, a gardener by trade, died on the 22nd ult., at Taunton, in his 107th year. His age, it is stated, is well authenticated. He was born at Dunhead, in Wiltshire, on March 3rd, 1784, and removed to Taunton in 1820.

ESSEX AND COLCHESTER GENERAL HOSPITAL.—The report for the past year shows an excellent record of work done. The in-patients numbered 585 and the out-patients 1814. The total income for the year was adequate to discharge the expenditure, to clear off a small deficiency existing at the beginning of the year, and to leave a small balance in hand. The experiment initiated in January, 1888, of giving a salary (£200) to the physician in charge of the whole medical work of the hospital does not seem, judging from the report of 1890, to have injured either the finances of the hospital or its popularity, as the income of the institution has already exceeded that of 1887 by a sum slightly in excess of that accorded to the physician.

GREAT NORTHERN CENTRAL HOSPITAL.—The annual report for the past year of this hospital, which is situated in the Holloway-road, states that for want of adequate accommodation a great many serious cases seeking admission had been sent to other hospitals, or obliged to wait a long time before they could be received. The completion of the buildings had become urgent, and public assistance is solicited to enable the governors to carry out the work. The estimated cost is £20,000, and there is only about £1000 of this sum in hand. During the year there had been a large additional number of new cases admitted, equal, as compared with the previous year, to nearly one-sixth.

COTTAGE HOSPITALS.—*Bourton-on-the-Water Hospital:* Since the foundation, in 1861, of this hospital, 1107 patients have received treatment. At that period no similar institution existed in the county, but now, within a radius of about ten miles, there are four other cottage hospitals. Notwithstanding this addition, the average yearly number of cases has been maintained—namely, thirty-five in-patients. The financial position is satisfactory, a balance of £67 13*s.* 6*d.* remaining in hand.—*Bingley Hospital:* The first annual meeting of the subscribers was held recently. The annual report stated that since the opening of the hospital in September last thirteen patients had been admitted. The ordinary account showed a balance in hand of £137, and there was a credit balance of £384 on the building account. Promises of annual subscriptions had been received amounting to £160.

PRESENTATIONS.—On the 21st ult., at the distribution of the certificates of first aid in connexion with the St. John Ambulance Association, the members of the Duffield branch of the Derby centre gave a supper, and presented Mr. Robert Morrison, L.R.C.P. and L.R.C.S., with a handsome pollard oak writing case, bearing a silver plate with an inscription expressive of the pupils' appreciation of the services of the lecturer.—At a well-attended meeting of members of the committee and of the medical staff of the Royal South London Dispensary, held on the 3rd inst., a handsome clock bearing the following inscription was presented to Dr. C. Corbett Blades, late senior surgeon, and who has now been appointed consulting surgeon to the institution:—"Presented to C. Corbett Blades, Esq., M.D., by members of the committee and of the medical staff of the Royal South London Dispensary, in recognition of the assiduous and valuable services rendered by him during a period of thirty years as one of the honorary medical officers of the institution."

METROPOLITAN POLICE SURGEONS' ASSOCIATION.—A general meeting of the Association will be held at Cannon-street Hotel on Thursday, March 12th. The chair will be taken by Mr. Alex. O. Mackellar, F.R.C.S., at eight o'clock, when a paper on some cases of medico-legal interest will be read by Mr. H. Nelson Hardy, F.R.C.S. Edin.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.—A meeting of the general committee of the International Congress of Hygiene (of which the Queen has consented to become patron) will be held at 20, Hanover-square, on Monday, March 16th. His Royal Highness the Prince of Wales will preside, and will take the chair at 3.30 o'clock precisely.

THE SANITARY INSTITUTE.—A sessional meeting of the institute will be held at the Parkes Museum on Wednesday, March 11th, at 8 P.M., when a paper will be read on "The Prevention of Infectious Diseases" by Professor A. Wynter Blyth, M.R.C.S., medical officer of health for Marylebone. The paper will be followed by a discussion. Sir Douglas Galton, K.C.B., F.R.S., will occupy the chair.

SOUTHPORT INFIRMARY.—During the year 1890, 351 in-patients were treated, of whom 79 were cases of accidents. The out-patients numbered 2366. The total income on the general account was £2202 17*s.* 8*d.*, and the expenditure £2075 6*s.* 4*d.*, leaving a balance of £127 11*s.* 4*d.*, which had been transferred to the extension building account. This account now showed a debit of only £31 19*s.* 1*d.* During the year legacies and donations amounting to £399 2*s.* 7*d.* had been added to the investment fund, which now stands at £9379 8*s.* 11*d.*

EAST LONDON HOSPITAL FOR CHILDREN.—The twelfth annual dinner in aid of the funds of this hospital was held on Monday evening at the Hôtel Métropole. The Duke of Portland presided. His lordship, in proposing "Success to the East London Hospital for Children," referred to the ever-increasing benefits it brought to the very poor of the district in which it was situated. He urged the public not to desert old and well-tried institutions for unfledged schemes, which might or might not be of great utility. The Secretary, Mr. Whitford, announced donations to the amount of £4500, including one of £200 from the chairman, through whom no less than £1600 had been given to the institution.

EASTERN HOSPITAL INQUIRY.—The inquiry into the alleged maladministration of the Eastern Hospital has resulted in the production of very important evidence. Mr. Eldridge appeared for the complainants, and Mr. Gye for the Metropolitan Asylums Board. Evidence has been given by patients and former nurses, to the effect that the food supplied was inferior; occasionally the bread was mouldy or mouse-eaten. Cocoa was seldom supplied, and the fish was stated to be unfit for human food. Complaints relative to the bad quality of the food were made to the medical officer from time to time, but produced, as alleged, no definite reply except that patients could not expect to be supplied with food of the first quality. It was also alleged that bedsteads were removed without disinfection from one ward to another for the use of patients, and the result was in many cases outbreaks of infectious disease.

KING'S COLLEGE HOSPITAL.—The fifty-second annual meeting of the supporters of this hospital took place on the 25th ult., Mr. Richard Twining occupying the chair. The report, which was of a satisfactory character, showed that the hospital was now maintaining on the average more than 200 beds. The total number of cases under treatment in the hospital during 1890 was 2518, as compared with 2185 in the previous year. This increase, it may be explained, is due to the Cheere Ward having been opened, consequent on a gift (the fourth of its kind) of £1000 by Mr. Matthew Whiting, one of the vice-presidents of the hospital. The number of cases which had been under treatment was larger than in any previous year by about 250. The total increase of expenditure during 1890 was only £733 11*s.*, and in return for this the fifteen beds in the Todd Ward had been open during the whole year, and the fifteen in the Cheere Ward for the last two months. As regarded the nurses, under the new rules their hours would be reduced from 11½ to 9¾. The report was unanimously agreed to, and the rest of the business, which was of a formal character, having been gone through, the proceedings terminated.

THE LONDON SANITARY PROTECTION ASSOCIATION.—The report of the Council for the year 1890 shows a further increase of membership in the tenth year of the Association's existence. The total number of members was 1588—an increase (after deducting withdrawals) of 81 on the previous year. There were 490 houses inspected for the first time during the twelve months. The special inspections numbered 457, against 439 in 1889. The cash statement showed a balance in hand of £680 5*s.* 7*d.*

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of several medical men practising in the neighbourhood of Highbury and Canonbury was held on Wednesday, Feb. 25th, at Northampton House, St. Paul's-road, convened by the council of the British Medical Temperance Association. The President, Dr. B. W. Richardson, gave an address, and an interesting discussion followed on the practice of total abstinence, in which several medical practitioners took part. Dr. Westcott stated that one fifth of all the inquests held by him were on cases in which death was more or less due to drink. It is proposed to hold similar meetings in other districts of the metropolis.

YORKSHIRE COLLEGE, MEDICAL DEPARTMENT.—The Dean, Mr. Scattergood, presided at the twelfth annual dinner of the past and present students of the medical department of this College, which took place at the Queen's Hotel, Leeds, on the 27th ult. A large and influential company attended. The toast of "The Queen" having been honoured, Dr. Churton proposed "The Victoria University," which was responded to by Principal Bodington. Dr. Chadwick gave "The General Infirmary," and Dr. Eddison replied. Other toasts followed. During the evening, songs and musical selections were given, and the occasion was a complete success.

MEDICAL NOTES IN PARLIAMENT.

Local Government Provisional Order (Poor Law) Bill.

IN the House of Lords on Monday, March 2nd, this Bill was read a third time and passed.

Smoke Nuisance Abatement (Metropolis) Bill.

Lord Stratheden and Campbell moved the second reading of this Bill, which differed from its predecessors in that the intervention of the Home Office was dispensed with. The Earl of Kimberley thought the Bill should not be accepted. He explained that the Bill imposed a penalty on all householders who allowed opaque smoke to issue from their chimneys. He supposed all smoke was more or less opaque, and so the Bill contained a definition whereby "opaque smoke" was taken to mean "smoke of such volume and density as unnecessarily to impair the atmosphere." The Courts would find that definition somewhat amusing. He did not think it was much use to pass legislation which could not be carried out in practice. He understood the difficulty was that no fireplace had been invented which could consume its own smoke. The Marquis of Salisbury criticised the expression "opaque smoke" and the definition of the term in the Bill. There might be smoke with no density at all—it might be absolutely translucent. Was it to be said that such smoke, if it were emitted in volume, was to be considered opaque smoke? What was meant by impairing the atmosphere and doing so "unnecessarily"? The Bill omitted all reference to furnaces. Its provisions would require very careful reconstruction. The Bill was read a second time.

Inspectors of Factories and Workshops.

On Thursday, Feb. 26th, in the House of Commons, in reply to Mr. Leng, Mr. Matthews said that the existing Act gave him power to appoint female inspectors in factories and workshops, but there were strong objections to its exercise in that direction. In the Bill now before the House the sanitary supervision would be made over to the local authorities.

Ether as an Intoxicant in Ireland.

The Chancellor of the Exchequer, replying to Sir L. Playfair, said there would be no objection to the Select Committee on British and Foreign spirits being put in possession of the report made to the Government on the use of ether as an intoxicant in Ireland.

Compulsory Vaccination Acts.

Mr. Ritchie, in answer to Mr. De Lisle, said that he had been in communication with the Royal Commission appointed to inquire into the working of these Acts, but there was no hope that their report would be presented to Parliament this session.

London Overhead Wires Bill.

On the occasion of the second reading of this Bill on Friday, 27th ult., Sir R. Lethbridge moved: "That it be an instruction to the committee to which the Bill is referred to consider the advisability of amending the Bill, so that its provisions may be in accordance with Part II. of the Public Health Acts Amendment Act, 1890." He said that as the Bill was admitted to be a compromise, the compromise would be more satisfactory, more complete, and more fair if the Committee were to be instructed to assimilate the provisions of the Bill as it affected the metropolis to the provisions of the law as it affected the provinces generally. The Public Health Acts Amendment Act was passed after a good deal of careful consideration, and its provisions had been found to work satisfactorily in various large towns. He therefore thought it would be well if they were extended to London. After some discussion the proposed instruction was carried by a majority of 16.

The Fog Nuisance.

In the House of Commons on Monday, in reply to a question by Viscount Wolmer and Sir H. Tyler, Mr. W. H. Smith stated that Her Majesty's Government were sceptical as to the value of a Royal Commission for the Investigation of the Fog Question. The evil arose mainly from smoke emitted by domestic fires, and the problem to be solved was whether it was possible by legislation to prohibit and prevent the production of smoke in this way. The Committee of 1887 showed that smoke could be prevented by the use of non-bituminous coal for heating purposes, or by the use of coke or gas, or by the use of an improved grate.

New Bills.

Mr. Ritchie has obtained leave to bring in the following Bills relating to the public health law, viz.: A Bill to Amend the Laws Relating to Public Health in London and the Public Health Law Consolidation Bill, a Bill to Consolidate the Laws Relating to Health in London. Both Bills were read for the first time.

Notices of Motions.

Mr. Atkinson's Bill to regulate the income of dowagers has given rise to considerable amusement among members of Parliament. Although the measure is not regarded in a serious light, Mr. Esslemont has given notice of a motion to the effect "that as dowagers have had no addition to fixed allowances from agriculture in prosperous times, it is unjust, unmanly, and unfair to compel them by legislation to accept a reduced allowance during the present depression."

Sir Walter Foster and Dr. Cameron have been peculiarly unfortunate in their efforts to obtain suitable places in the order list of the House of Commons for the motions in which they are interested. It is the wish of the former to call attention to the losses sustained by charities through the non-payment of rent charges, and of the latter to call attention to the state of our laws respecting the disposal of the dead. The ballot has been unkind to both gentlemen. It has given Sir Walter Foster fourth place on Tuesday, the 17th inst., and Dr. Cameron sixth place on the same day. The character of the motions having precedence makes it highly improbable that either Sir Walter Foster or Dr. Cameron will be heard then.

Mr. Gray will ask the Secretary of State for War on Tuesday next whether there is any foundation for the report that frozen meat, badly preserved or of inferior quality, supplied to soldiers at Colchester and other garrisons, has given considerable dissatisfaction, and whether he will consider the advisability of supplying the army with "fresh killed meat, which is obtainable in Great Britain and Ireland at from fourpence to sixpence per pound."

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday. Earl Sandhurst occupied the chair, and the other members of the Committee who attended were the Archbishop of Canterbury, the Earl of Kimberley, Lord Monkswell, Lord Saye and Sele, Lord Clifford, Lord Cathcart, Lord Zouche, Lord Thring, the Earl of Lauderdale, and the Earl of Erne.

University College Hospital.

Mr. N. H. Nixon, secretary of the University College Hospital, examined by the chairman, said that the institution was practically a free hospital. The qualification for admission was disease, although they had a system of governors' letters. The institution was started as a dispensary in 1828, and founded as a hospital in 1833. There were 207 beds in the hospital, the working number being 181. The e were only two dispensaries in the immediate district, and the Middlesex was the nearest hospital. His salary amounted to £600. They had often to send away patients through want of room. In the course of last year they treated 41,732 new cases. As to the organisation of the hospital, there was an annual meeting of donors and subscribers. Then there was a fortnightly meeting of the Hospital Committee, which was composed of fourteen donors or subscribers, seventeen nominees of the Council of the University College, and three delegates from the Medical Committee. The Hospital Committee were practically the executive of the hospital. In the way of sub-committees, they had the House and Finance Committee and the Samaritan Fund Committee. The Sister Superior was summoned once a month to the House and Finance Committee. In the absence of witness the clerk and steward performed his duties. The total income of the hospital last year amounted to £19,334 and the expenditure to £19,560. Legacies had yielded about £4300 per annum during the past ten years. They found it profitable to be always advertising and applying for funds. The capital invested amounted to £112,042, only a small part of which could be used. They had not had to keep any beds empty through lack of funds. The resident medical officer admitted the patients, both medical and surgical. He received a salary of £150, with board and lodging. The officer of the staff who happened to be on duty admitted patients to the out department. If a case of scarlet fever presented itself, it was at once isolated, and a telegram was sent to the Metropolitan Asylums Board. They admitted cases of diphtheria when there was danger to life. They had separate wards for such cases. The contracts for food went before the House and Finance Committee, who made recommendations to the Hospital Committee. The food, as a rule, was taken in by the steward. He had never heard complaints from patients as to the food.—The Earl of Kimberley: Then you are quite perfect?—Mr. Nixon: I do not say so, but that I have never heard complaints. The question of the quality of food is dealt with before it reaches the patients. If there is any fault, the food goes back to the contractor.—Further examined by the Chairman, witness said that the surveyor of the hospital would be called in if any complaint were made as to the drains. They had a plan of the drains which was kept up to date. The hospital was nursed by a sisterhood associated with the Church of England. They found this arrangement to work excellently. No difficulties had arisen as to the division of authority. They had a Church of England chaplain, but they admitted ministers of all denominations at any time. They had a separate ward for children. Witness preferred to see children in a separate ward. Children disturbed adults to a considerable extent.—By the Earl of Kimberley: In 1879, and again in 1888,

considerable alterations were made in the drainage system of the hospital. In the latter year the drains were examined by an expert sanitary engineer. No doubt it would be a good thing to have a yearly inspection by an expert sanitary engineer wholly unconnected with the hospital.—The Earl of Kimberley: Has there been no dissatisfaction on the part of the authorities with the buildings being old?—Mr. Nixon: Yes, but the buildings are as good as we can expect. The Earl of Kimberley: The buildings have been improved?—Mr. Nixon: Not structurally, but the drains have been put in thorough repair.—The Earl of Kimberley: But the buildings are structurally inconvenient?—Mr. Nixon: Yes, and it is contemplated to rebuild the hospital.—In further examination by Lord Kimberley witness said that the hospital was originally founded as the medical school of the University College. The Hospital Committee reported its proceedings to the Council of the College. The finances of the two bodies were kept entirely separate, the College merely acting as trustees of the hospital.—By the Archbishop of Canterbury: No difficulties arose in the relations between the College and the hospital.—By Lord Cathcart: On one side the hospital buildings abutted on some houses which he might say were being purchased by the hospital in view of the reconstruction scheme. The midwifery cases which they treated were not of the class that general practitioners cared for. The people were very poor. The wife of a man receiving £2 a week in wages would not be treated. They did not limit the cases to the teaching requirements.—The Earl of Kimberley: Is not that a directly pauperising arrangement?—Mr. Nixon: It is difficult to define the term pauper.—The Earl of Kimberley: Do you think it is a desirable thing to provide a system by which people shall know beforehand that they have not to provide for the expenses of confinement?—Mr. Nixon: I do not think that that enters into the consideration at all.—The Earl of Kimberley: So I observe; but don't you think it ought?—Mr. Nixon: Yes, perhaps it ought.—The Earl of Kimberley: Do you not think it is a very undesirable thing that in any hospital in London more cases of this kind should be taken than are necessary for the purposes of instruction?—Mr. Nixon: I find it difficult to answer that question, because I think the cases are really so poor.—By Lord Thring: He should like very much to see the floors renewed. No religious tests were applied to the nurses. Mr. Nixon here volunteered a suggestion. It occasionally occurred, he said, that patients became affected with mania, and were very noisy. Before they could be removed the whole machinery of the relieving office had to be invoked. All he wished to suggest was that it would be a great convenience to hospital staffs generally if the certificate of the officer under whom the patient had been in the ward were accepted as sufficient to send the patient in an ambulance to the infirmary or the workhouse.

Sister Cecilia, of the community of All Saints, examined by the Chairman, said that the sisterhood nursed the University College Hospital. Under the contract the sisterhood received £192 5s. per month for the work. There were nine ward sisters, fifty-six nurses, and thirteen probationers. They had one ward sister between two large wards. They did not employ ward maids, but had scrubbers. The sisters were practically on duty from six o'clock in the morning until 10 o'clock in the evening. In the sisterhood they had sufficient nurses for all the needs of the hospital. Apart from private nurses they had 112 nurses in the sisterhood.—By the Earl of Kimberley: Any complaint as to the conduct of nurses would be dealt with by witness.—By the Archbishop of Canterbury: The quality of the food in the hospital was excellent. If anything went wrong it was at once remedied. The sisterhood engaged nurses from all denominations.—By Lord Thring: She did not think the nurses were overworked. During the past nine years there had been only five deaths among the nurses. The average length of service of the nurses on duty was between six and eight years. She could not suggest any means by which the lives of the nurses could be lengthened.

Dr. Barlow, for ten years on the staff of the hospital, stated that the accommodation of the out-patient department was very satisfactory. The space available was by no means crowded. There was no systematic inquiry as to the circumstances of the patients. If he found a man in better circumstances he would treat him on the first application, but inform him not to return to the hospital. It might be desirable to have an inquiry officer, but he would require to be a superior person and not a mere mercenary individual. He was decidedly in favour of out-patient departments. He did not think they starved outside practitioners. He should certainly like to see a new hospital, although he considered the present building to be quite sanitary. He would not say that there were no cases of abuse of the charity which the hospital offered, but he would say that such cases were rare. He did not think that the poor suffered in the hospitals through the presence of students. On the other hand, he considered that the poor benefited by the presence of the students. Those hospitals which had medical schools attached were the most popular among the poor.—By Lord Cathcart: He considered that nurses were bad lives to insurance companies in the same way as were doctors. He did not think that as regards the University College Hospital there was any special wear and tear among nurses.

Mr. A. E. Barker, a surgeon on the staff of the hospital, expressed himself strongly in favour of out-patient departments. The complaint against out-patient departments came from a very undesirable fringe of the profession. He believed they interfered with this fringe, and he thought it proper that they should interfere. In his opinion the public had great confidence in the general hospitals of London.

Mr. Berkeley Hill, at one time dean of the medical school, gave evidence as to that institution.

The Committee afterwards adjourned.

Their lordships met again on Thursday, Earl Sandhurst presiding.

The Royal Free Hospital.

Mr. C. W. Thies, secretary of the Royal Free Hospital in Gray's-inn-road, examined by the Chairman, stated that their institution was a general hospital. The students who attended for clinical instruction were attached to the London School of Medicine for Women. It was entirely a free hospital. The governors had no privileges whatever in respect to the admission of patients. No letters were issued, all cases being admitted on the discretion of the medical officer. They had a weekly board, at the meetings of which six or seven governors usually attended. This board was practically the executive of the hospital. He called special meetings when necessary. In a case of insubordination he would undoubtedly suspend the officer, and immediately report the matter either to the weekly board or its chairman. There were 160 beds in the hospital, the working average being about 135. They admitted all diseases save infectious diseases. They had no special accommodation for special diseases. At the time of the last cholera epidemic in London the committee threw the hospital open entirely to cholera patients. In 1832 they admitted 700 cholera cases, in 1849 about 3000 cases, and in 1854 about 6000 cases. He could not explain how accommodation had been found for so large an influx of patients. They had not been compelled to keep beds vacant through want of funds. They kept things going by "eating the capital." The ordinary income last year amounted to £6048, and the legacies to £6855. From 1881 to 1890 the ordinary income averaged £5028, and the legacies £7570. The expenditure last year amounted to £10,671; the invested funds of the hospital amounted to £20,931. They were about to issue an appeal for funds upon a large scale. The hospital was founded in 1828. In 1842 the hospital was removed from Hatton-garden to Gray's-inn-road, where it occupied some old barracks formerly used by the Light Horse Volunteers. Owing to the receipt of legacies the committee were able to rebuild three sides of the quadrangle without appealing to the public. The remaining side was the present front, which was in such a dilapidated condition that unless they spent a very large sum of money upon it they would probably have the roof coming down. The committee now wished to rebuild this front. A staff nurse complaining of food would speak to the lady superintendent, who would report to witness or the weekly board. Minor complaints were received from time to time, but none of a serious character. The architect was responsible for the sanitary condition of the building. He would not describe that gentleman as a sanitary expert, but he had a thorough knowledge of all sanitary matters. They had a drainage plan which was kept up to date. The steward was responsible for the drains being flushed every week, and was required to report to witness in the event of finding anything amiss. The drains were tested about once a year. In connexion with their building scheme they contemplated a complete revision of the drainage system. He had never had any suspicion as to anything being wrong with the drains. He did not think that a bad odour could be detected in any part of the building. They had a lady superintendent and forty nurses. They had a system of training which extended over three years. At the end of that period, and after examination, nurses received a certificate. The question of pensions for nurses was being considered by the committee. The nurses on day duty worked from 7 in the morning until 8.30 in the evening. Every nurse was off duty for two hours per day, and had an allowance of two hours and a quarter per day for meals. The time spent in the wards, therefore, amounted to nine hours and a quarter per day. Every nurse had besides one whole day per month and four hours and six hours per month. The annual holiday extended to about three weeks. During the four years they had done their own nursing there had been only four cases of illness in the nursing staff and no deaths. They did not employ ward maids. The Earl of Kimberley: Why does the lady superintendent dine in what I may call this solitary grandeur?—Mr. Thies: It is merely a personal matter.—The Earl of Kimberley: Does she consider the nurses below her?—Mr. Thies: Oh, no, but she has to carve for the general body of the nurses, and it is hardly likely that she would care to eat her own dinner at the same time. She attends and carves at three dinners per day. By the Chairman: They did not supply patients with tea, sugar, or butter. It was a mere question of expense, and was now being considered by the board. By Lord Cathcart: He should like to see telephonic communication between the hospitals in London. They did not keep a ward temperature book. By the Earl of Lauderdale: There were 17,263 out-patients last year, and in addition 10,894 casualty cases. By the Earl of Kimberley: He estimated that the hospital saved the parish about £2000 a year, and on that ground he considered it would be free for parochial assessment. By the Chairman: He estimated the cost per occupied bed last year to have been £66 11s. Each out-patient, it was calculated, cost 1s. 3d. He should like to see greater uniformity in the accounts of the London hospitals. Comparisons at present were altogether fallacious. He had been in the out-patient department of every hospital in London, and he believed that there was very little abuse of charity. They were making a special appeal for assistance to the Great Northern Railway Company, whose *employés* were brought in large numbers to the hospital. He calculated that the patients from the Great Northern Railway Company cost the hospital about £500 a year.

Mrs. Garrett Anderson, Dean of the Medical School for Women, whose students receive their clinical instruction in the Royal Free Hospital, gave evidence as to the work of the school. There were, she said, 107 students, the number being on the increase. This year they had thirty-four new students, which was the largest number on record. The students paid £110 for the course of study, and of that sum £70 went to the school and the remainder to the hospital. There were forty-three students studying for the London qualifications.—By the Earl of Kimberley: Two ladies had passed the M.D. examinations, and a very large number the M.B. examinations. The course of instruction in the hospital was nearly the same as that in force in hospitals where male students were taught. Their students had a good deal of trouble in getting their out-door midwifery instruction.—By the Earl of Arran: There were about 120 qualified women on the Register, and they were nearly all in practice. A great number were abroad, but they were gradually scattering over the large towns of England. She thought that, as women went, the medical profession was a very good profession for women. Women were not so ambitious as men in the matter of making large incomes, and she thought they had every reason to be satisfied with the medical profession.

Mr. Calbert, assistant physician at the Royal Free Hospital, gave evidence as to the working of the out-patient department. He expressed himself as strongly in favour of the retention of out-patient departments. General practitioners could lose only very little through their existence, for the patients were extremely poor. The presence of the lady students in no way hampered the work of the out-patient department. As a matter of fact, the lady students were very useful.

Mr. James Berry, surgeon of the hospital, said he was quite satisfied with the sanitary condition of the hospital. As a rule, there was sufficient material for teaching purposes. He considered that it would be very advantageous to send the students round the infirmaries.—By Lord Monkswell: He approved of the appointments to the staff being limited to holders of London qualifications. It would be inadvisable to admit other qualifications.

The Committee then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, W., F.R.C.S., has been appointed Consulting Surgeon to the Great Northern Central Hospital, Holloway-road.

BERRY, F. C., M.D., M.B., B.Ch., has been reappointed Medical Officer of Health, Lynton.

BOGDEN, P. HAMILTON, M.B., C.M. Edin., has been appointed Medical Assistant to the Dundee Royal Lunatic Asylum.

COOKE, R. T. E. B., L.R.C.P., F.R.C.S. Edin., M.R.C.S., has been reappointed Honorary Consulting Medical Officer to the Royal Northern Sea-Bathing Infirmary, Scarborough.

DIXEY, ARTHUR CROSBEE, M.D. Mass., M.R.C.P., L.R.C.S. Edin., L.S.A. Lond., has been appointed Medical Officer for the Caldicot District of the Chepstow Union, Surgeon to the Severn Tunnel, Great Western Railway, and Tin Plate Company's Works; Certifying Factory Surgeon, Medical Referee to the Prudential Assurance Company, and Surgeon to Oddfellows, Foresters, and other Clubs, vice O. T. Slatter, resigned.

EVANS, M. G., M.D. Aberd., L.R.C.P. Lond., M.R.C.S., has been appointed Consulting Physician to the Brecon County and Borough Infirmary.

GRACE, HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Kingswood Urban Sanitary District of the Keynsham Union.

HICKMAN, HERBERT V., M.R.C.S., L.R.C.P. Lond., late House Physician, has been appointed Ophthalmic Assistant to Guy's Hospital.

LOVE, Dr. JAMES KERR, has been appointed Aurist to the Deaf and Dumb Institution, Longside, Glasgow.

MARSHALL, CHARLES DEVEREUX, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to University College Hospital.

MILLS, JOSEPH, M.R.C.S., &c., has been appointed Anæsthetist to St. Mark's Hospital, City-road.

READ, SIBLEY W., L.D.S. R.C.S. Eng., has been appointed Dental Surgeon to the Metropolitan Hospital.

SAUNDERSON, ROBT., Jun., M.D., L.K.Q.C.P. Irel., has been appointed Medical Officer to the Edenderry Dispensary, Edenderry Union.

SIMMONS, E. WALPOLE, M.B. Durh., M.R.C.S., has been appointed Honorary Physician to the Worcester Infirmary, vice Strange.

SMITH, E. M., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the York Friendly Societies' Medical Association, vice G. Scarr, resigned.

SYKES, J. H., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer of the Crumpsall Workhouse, and also Assistant Medical Officer of the Workhouse and Receiving Wards, Bridge-street, in the township of Manchester.

TAYLOR, J. W., M.D. St. And., M.R.C.S., has been reappointed Honorary Consulting Medical Officer to the Royal Northern Sea-Bathing Infirmary, Scarborough.

VERNON, A. H., L.R.C.P. Lond., F.R.C.S., has been appointed Honorary Surgeon to the Boscombe Hospital and Provident Dispensary, vice Nunn, resigned.

WEBB, F., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Doncaster Infirmary, vice Lund.

WHEATON, S. W., M.D. Lond., M.R.C.P., D.P.H., has been appointed Physician to the Royal Hospital for Children and Women, Waterloo-bridge-road, vice Dr. Dakin, resigned.

WOOD, W. D., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Combined Districts, Thame.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 70, Gloucester-street, S.W.—House Surgeon. No salary, but board, lodging, fuel, and light provided.

BIRMINGHAM PROVIDENT DISPENSARY.—Medical Practitioner on the staff of the Balsall-heath Branch. (Apply to Rev. W. C. Thomas, Hon. Sec., Moseley, Birmingham.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Medical Officer for one year. Salary £80 per annum, with board and residence.

FOREST-HILL PROVIDENT DISPENSARY.—Medical Officer. (Apply to the Hon. Secretary, the Ridge, West-hill, Sydenham.)

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons to take charge of the out-patients.

HULL ROYAL INFIRMARY.—Ophthalmic Surgeon.

KING'S COLLEGE, London.—Demonstrator of Physiology.

LEITH HOSPITAL.—House Physician for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LEITH HOSPITAL.—House Surgeon for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LEITH HOSPITAL.—Surgeon for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

NORFOLK AND NORWICH HOSPITAL.—Physician on the Honorary Medical Staff. (Apply to the Secretary, Norwich.)

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Junior House Surgeon for nine months, at a salary of £5 per month.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Junior Resident Medical Officer for six months. Board and residence provided in the Hospital.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House Surgeon and Secretary. Salary £80 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging, and washing.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Physician.

SUSSEX COUNTY ASYLUM, Hayward's Heath.—Junior Assistant Medical Officer. Salary £100 a year, with board, lodging, and washing.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY AND CONVALESCENT HOME.—House Surgeon (to act also as Secretary). Salary £40, with board and lodging.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing in the Hospital.

WEST HAM UNION.—Assistant (Resident) Medical Officer for the Workhouse. Salary £100 per annum, with the usual resident allowances. (Apply to the Clerk, Clerk's Office, Union Workhouse, Union-road, Leytonstone, E.)

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board and lodging provided. No salary.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided. No salary.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

X. N. P., THE LANCET Office, 423, Strand, W.C.—Medical Officer to take full charge of a Dispensary in the East of London. Salary £100, with partially furnished rooms, fuel, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BOYTON.—On March 1st, at 65, Seymour-street, Hyde-park, the wife of Ivan H. Boyton, L.D.S. R.C.S. Eng., of a daughter.

BURKE.—On Feb. 13th, at Civil Lines, Poona, the wife of W. H. Burke, M.B., Indian Medical Service, of a son.

CLARK.—On March 2nd, at Eahere, Brunswick-road, Gloucester, Mrs. Oscar Clark of a daughter.

GOULD.—On March 4th, at 10, Queen Anne-street, the wife of A. Pearce Gould of a daughter.

GUNN.—On March 3rd, at 54, Queen Anne-street, Cavendish-square, W., the wife of R. Marcus Gunn, F.R.C.S., of a daughter.

HUNTINGTON.—On Feb. 28th, at 43, South-street, St. Andrews, the wife of William Huntington, M.R.C.S., L.R.C.P. Lond., of a daughter.

VENN.—On Sunday, March 1st, at 122, Harley-street, W., the wife of Albert J. Venn, M.D., M.R.C.P., of a son.

WILLIAMSON.—On Feb. 26th, at Eldon-square, Newcastle-upon-Tyne, the wife of G. E. Williamson, F.R.C.S., of a son.

MARRIAGES.

POWER—CLUTTERBUCK.—On Feb. 26th, at St. Andrew's Church, Plymouth, E. R. Power, Surgeon-Major Army Medical Staff, only son of the Rev. E. R. Power, The Nant, Balbriggan, county Dublin, to Catherine Annie, only child of Surgeon-General J. E. Clutterbuck, M.D., Army Medical Staff (retired), of Newark Park, Wotton-under-Edge, Gloucestershire.

SAVAGE—BOUSFIELD.—On Feb. 9th, at St. Paul's, Capetown, S. Radford Savage, M.B., of Maseru, Basutoland, to Mary Isabel Bousfield, second daughter of the Bishop of Pretoria.

SIMPSON—MACNAUGHTON.—On Feb. 28th, at St. Peter's Church, Paddington, John Pollock Simpson, M.B., to Annie Johanna Stuart (Bennett), daughter of the late Alexander Macnaughton, J.P., Banker, Scotland.

DEATHS.

ALLAN.—On March 2nd, at 23, Milner-square, John Allan, M.D., M.R.C.P., in his 76th year.

ARCHER.—On Feb. 25th, at Boyne-terrace, Notting-hill, William Archer, F.R.C.S., in his 83rd year.

MIDDLEMORE.—On March 1st, at his residence, The Limes, Bristol-road, Birmingham, Richard Middlemore, F.R.C.S., in his 87th year.

PIERSON.—On Jan. 29th, at Shelabagh, Khojak Pass, Baluchistan, of typhoid fever and pneumonia, Alfred Henry Pierson, Surgeon Indian Medical Service, eldest Son of the late Henry C. Pierson, of the India Office.

WAKEFIELD.—On Feb. 25th, at Alwyne-place, Canonbury, N., Thomas Wakefield, M.R.C.S., in the 82nd year of his age.

WOLFF.—On March 1st, at the residence of his nephew, North Audley-street, Grosvenor-square, Dr. Julius Wolff, in his 90th year.

WORTHINGTON.—On Feb. 26th, at Pattensweir, Enfield, Frederick Worthington, M.R.C.S., formerly of Liverpool, aged 81.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, March 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Mr. Mark Hovell: Chronic Suppurative Inflammation of the Middle Ear, and its Treatment. (Post-graduate Course.)

SOCIETY OF ARTS.—8 P.M. Prof. R. Meldola: Photographic Chemistry. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. The Adjourned Discussion on Dr. Douglas Powell's paper on Angina Pectoris will be reopened by Dr. Lauder Brunton.

Tuesday, March 10.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. T. Oliver: Lead Poisoning in its Acute and Chronic Manifestations. (Goulstonian Lecture.)

SOCIETY OF ARTS.—8 P.M. Mr. J. Starkie Gardner: Enamelling and Damascening.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. F. J. Sykes: Nature of Nuisances, including Nuisances the Abatement of which is Difficult.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. W. Hale White and Mr C. H. Golding-Bird: Two cases of Idioglossia.—Dr. Frederick Taylor: A case of Defective Articulation.

Wednesday, March 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Norris Wolfenden: The Use of Electricity in Diseases of the Throat. (Post-graduate Course.)

HUNTERIAN SOCIETY.—8 P.M. Dr. Hughlings-Jackson will exhibit a Phonogram—talking of a patient the subject of Disseminated Sclerosis. Dr. J. Langton Hewer: A case of Chronic Osteo-myelitis of Tibia, with Specimen.—Dr. F. C. Turner: A Specimen of Ulcerative Aortitis. And other Specimens.

SOCIETY OF ARTS.—8 P.M. Mr. H. Newman Lawrence and Dr. Arthur Harries: Electricity in relation to the Human Body.

Thursday, March 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor C. Meymott Tidy: Modern Chemistry in relation to Sanitation.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Broadbent: Structural Diseases of the Heart, from the point of view of Prognosis. (Lumleian Lecture.)

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait: Further Observations on the Methods of Restoring the Perineum.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Mr. Treacher Collins: On the Glands of the Ciliary Body.—Dr. Benson (Dublin): On a case of Neuro-retinitis with High Tension simulating Intra-ocular Tumour. Mr. Cross (Clifton): On cases of Hydrophthalmos.—Mr. G. D. Johnston (Vancouver): Penetration of Eyelash into Anterior Chamber, removal by operation.—Mr. J. R. Lunn: Case of Coredialysis and Secondary Cataract. 10 P.M., Special General Meeting, to consider (1) Alteration of the date of the Bowman Lecture; (2) an address to Professor von Helmholtz on his seventieth birthday; (3) a motion by Mr. Tweedy (with the concurrence of the Council)—"That, in view of the course of medical study extending over a period of five years, it is expedient that the Ophthalmological Society of the United Kingdom urge upon the General Medical Council the desirability of making the subject of ophthalmic medicine and surgery a compulsory part of the ordinary curriculum."

Friday, March 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Mr. F. Bowreman Jessett: Surgery of the Intestines, with Demonstrations.

SOCIETY OF ARTS.—4.30 P.M. Capt. Abney: The Science of Colour.

CLINICAL SOCIETY OF LONDON.—8 P.M. Dr. Gowers: A case of Atrophic Spinal Paralysis and Multiple Neuritis.—Mr. A. Pearce Gould: A case of Simultaneous Gangrene of both Feet from Syphilitic Disease, amputation through knee-joints, recovery.—Mr. C. Mansell Moullin: Three cases of Septicæmia due to Sewer Gas.—Mr. A. T. Norton: A case of Popliteal Aneurysm in a Youth aged seventeen.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Diseases of Animals in relation to Meat Supply; Characteristics of Vegetables, Fish, &c., unfit for Food.

ROYAL INSTITUTION.—9 P.M. Dr. Felix Semon: The Culture of the Singing Voice.

Saturday, March 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 5th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 27	30·20	S.E.	40	38	81	60	34	..	Foggy
,, 28	30·30	S.E.	36	35	76	61	35	..	Foggy
Mar. 1	30·26	S.W.	48	46	81	56	36	..	Cloudy
,, 2	30·11	S.W.	51	50	69	58	47	..	Overcast
,, 3	30·25	S.W.	40	37	87	51	37	..	Bright
,, 4	30·39	W.	40	37	67	53	37	..	Overcast
,, 5	30·31	W.	50	47	85	57	40	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

DENTAL PRACTICE IN AUSTRALIA.

Medicus.—The Australian Dentists Act of 1887 provides that the following persons are entitled to registration as dentists:—1. All medical men or persons in the actual practice of dentistry at the date of the passing of the Act. 2. All persons over twenty-one years of age who have studied dentistry for four years, and passed the examination instituted by the Board. 3. All persons who for six months previously to the passing of the Act have been dentists or apprenticed to a dentist, and who shall continue in that capacity for a further term of three years. 4. Any person not domiciled in Victoria on showing that he has practised for ten years, and holds a foreign diploma.

Dr. A. Ogier Ward will see that the subject of his letter is fully dealt with in an annotation on p. 565.

Pauper should obtain a copy of the by-laws of the hospital.

Mr. J. B. Ball.—The paper will appear very shortly.

EXTREME HYPERPYREXIA.

To the Editors of THE LANCET.

SIRS,—The following may prove of interest to readers of THE LANCET. A. B——, aged twenty-two years, died on the sixth day of an attack of rheumatic fever. The temperature, taken a quarter of an hour before death in the axilla, was 109·2°. Taken again five minutes after death with a second thermometer it was found to be at exactly the same point. Both thermometers are perfectly reliable. There was no heart affection. I am, Sirs, yours faithfully,

Workington, March, 1891. C. MCKENOW, M.B., C.M.

TUBERCULINE.

Dr. Wm. Fergusson has favoured us with a copy of the following lines and charade, which were written by one of the "cases" recently under treatment by Professor Koch's method at the Chalmers Hospital, Banff.

I feel this mundane sphere's a fraud—
A gift not worth the giving;
That things are going to the bad,
And life's not worth the living.

It is not that the world is false,
Though false it is and vain:
That makes no riot in my pulse;
That brings my head no pain.

It is not that my love's unkind,
Though that is also true;
I bear *that* now with equal mind,
For it is nothing new.

It is not that I am in debt—
None ever gave me credit—
Nor am I turning crusty yet,
Though unkind folks have said it.

You ask: "Whence then this clouded brow?
This world dissatisfaction?"
I am inoculated now,
And this is the "Reaction"!

CHARADE.

I.

My *first* lies at the root of things,
With homely earth is soiled,
Yet at the festive board of kings
Is always welcome—boiled.

II.

My *second* o'er the level green
Impels the polished ball;
Where "cannons" rattle it is seen,
Yet loves the peaceful "stall."

III.

My *third* around the green earth lies,
No angel ever saw it;
'Twas never viewed by mortal eyes,
Yet men must somewhere draw it.

IV.

When wasting sickness crowns the ills
By hapless men endured,
My *whole* fresh strength and hope instils,
And whispers "Be thou cured!"

Mr. Reynolds (Leeds).—Dr. Liebreich's formula of his cantharidin solution is as follows:—Cantharidin, 0·2 grm.; potassic hydrate, 0·4 grm.; water, 20 cub centimetres. Add water up to 1 litre (1000 cc.). One cub. centimetre contains 0·0002 gramme, or 2 decimilligrammes.

Dr. Rentoul returns characteristically to a defence of his statement that many medical men are willing to take 7*s.* 6*d.* fees. We must leave the matter now to the judgment of the profession.

L.R.C.P. would do more good by bringing such facts under the notice of the Registrar-General or the Secretaries of the Defence Union.

Enquirer.—We cannot approve of such an alliance, or recommend it to our correspondent.

INSOMNIA.

To the Editors of THE LANCET.

SIRS,—Permit me through your pages to state a few particulars in reference to a case of above which has been exceedingly unyielding to treatment. I have prescribed in this case various preparations of opium, also chloroform, Indian hemp, the bromides, chloral, and hyoscyamus with only partial success. The opiates in full doses induced a moderate amount of sleep but required constantly increasing and were omitted subsequently in consequence of interference with secretions. The best results or hypnotic effects were obtained from the three last named in combination, but the doses required were very large, and some depression followed. A warm bath at a temperature of 96° F. just before going to bed, the use of a hot-water bottle to feet, and cold applied to head relieved headache and induced some sleep, but the effect was not maintained. These remedies were tried at commencement of attack with laxatives and alte atives before resorting to narcotics. Patient was formerly addicted to the use of alcoholic stimulants in excess, but this habit has been given up for some time, and the present attack is attributed to mental exertion in close application to scientific study (now prohibited) prolonged into the early hours of the morning for several months. There are no symptoms of organic cerebral disease, the headache being apparently functional, accompanied with dyspepsia, and relieved by remedies. Alkaloidal stimulants were freely taken by patient to relieve this symptom (chiefly strong tea), but now reduced in strength and quantity. Tobacco has been smoked largely, but the amount was reduced concurrently with that of alcohol. Although muscular and nervous debility exist, the present physical condition does not preclude out door exercise to a limited extent. I have had no experience of the therapeutic effects of sulphonal, hypnol, paraldehyde, or any of the recently introduced hypnotics. Perhaps one of your numerous readers would kindly suggest a remedy.

am, Sirs, yours truly,

Feb. 20th, 1891. M.R.C.S. 1858 AND L.S.A. 1859.

THE HEALTH OF FLORENCE.

Dr. Alexander R. Coldstream writes to us from Florence to the effect that an epidemic of enteric fever, lasting from Dec. 1st, 1890, to Feb. 25th, 1891, attacked 1477 persons, of whom 232 died from the disease out of a population of 181,000. The infection was derived from the contaminated water of an aqueduct supplied from an open stream in a mountain valley, about three miles from the city. The municipal authorities acted with decision and promptitude. As soon as the cause of the outburst became apparent the infected water was completely cut off from the city, and printed "hygienic precautions" were freely circulated throughout the town. A public furnace was erected in the outskirts of the city for disinfection of clothes and infected bed-linen at the municipal expense. The municipality has done its utmost in every way to mitigate the evil, and for some weeks boiled water has been gratuitously distributed to the poor. The reports of "typhus" which have appeared are erroneous, and were probably due to an error of translating the Italian *tifo abdominale* into "typhus." In other respects the condition of the public health is satisfactory. During the last month Florence has enjoyed glorious sunshine and blue skies, and the severity of the north wind has much diminished, the weather resembling, it is said, a June day in London.

RECIPROCITY BETWEEN MEDICAL PRACTITIONERS AND CHEMISTS.

To the Editors of THE LANCET.

SIRS,—If there were more reciprocity between medical men and chemists there would be fewer "medical and consulting chemists." A man must live, and if a chemist does business in a district where all the doctors dispense, and scarcely one writes a prescription in a year, he soon finds that it is but a poor living can be made out of pennyworths of salts and castor oil, and turns to counter prescribing or even visiting to increase the sale of his medicines and specialities. If all the medical men in a district would agree together to give up the (to them) usually distasteful work of dispensing, and either prescribe or employ the nearest trustworthy qualified chemist to make up all their medicines at a fixed rate per mixture, and thereafter to boycott any chemist who continued to entrench upon their legitimate sphere of work, I believe that it would prove beneficial to both parties. I know a practitioner in London who sends all his presciptions to a chemist and pays him quarterly at the rate of 3½*d.* per prescription; and I am of opinion that where there are three or four doctors to one chemist, it would pay the latter to do the dispensing at 3*d.* per prescription, bottles included, provided that the number of doses in each mixture be limited to six or eight, and that where twelve or sixteen doses are given the charge be doubled; expensive and unusual drugs to be charged at a special rate or paid for by the patients themselves.

Dispensing is degrading to the profession. The patient does not think, when he hands you his fee, that he is paying you for skilful advice and for the thoughtful consideration of his case. No, he is simply buying a bottle of medicine from you as he might buy a pound of butter from his grocer, and frequently seeks the "doctor's shop" where he will get it the cheapest. It is time that the public were educated into regarding members of the medical profession as something more than mere tradesmen; but that time will never come until we eliminate the spirit of the shopkeeper from our midst.—Yours truly,

Harpurhey, Feb. 25th, 1891. G. D. MACKINTOSH, L.R.C.P., &c.

L.R.C.P. (Reading).—The fee should depend partly on the means of the patient and the fee of the ordinary practitioner. It should not be less than one guinea, and as much more as is consistent with the above principles.

THE AMMONIO-CUPRIC TEST.

To the Editors of THE LANCET.

SIRS,—I should feel obliged if some of your readers, who have used Pavy's ammonio-cupric solution for the quantitative estimate of sugar, would assist me in the following difficulty. I find that the solution, after it is boiled and decolourised with the diabetic urine and is allowed to cool, again acquires a blue or bluish-green colour, accompanied with a flocculent deposit, which often has a reddish-yellow tinge. Is this as it ought to be? And if so, what is the re-colouration due to? I should add that I have applied the test not in a flask, as Dr. Pavy recommends, but in a large open test-tube.—Yours truly,

March 2nd. R. R.

DISINFECTANT DISTRIBUTOR.

To the Editors of THE LANCET.

SIRS,—With reference to the disinfectant distributor described in THE LANCET of Feb. 7th as a *new* invention, I beg to say I have had a similar apparatus in use for the last two years without requiring any attention except refilling with permanganate about every three months. My apparatus appears to differ in one or two particulars only. Firstly, that it is formed of non-corroding *metal*, and is therefore not porous, which it is quite unnecessary it should be, as its action is by the syphon tube. Secondly, it has a conical tube in the lid (which acts as both inlet and outlet for air) instead of the two holes, which appear to be much more likely to admit dust and dirt. Thirdly, it has a screw clip, by which it is attached to the side of the cistern.—Yours truly,

Ealing, Feb. 27th, 1891. B. POTTER.

A PERPETUAL CALENDAR.

THE Actuary of the Rock Life Office has inflicted a most ingenious perpetual calendar upon his day and generation, and kindly intimates that a copy will be furnished to any medical man on application to him. For those whose business in life it is to ascertain how the weeks pieced into the years in bygone ages, and how posterity will solve this problem in the next millennium, it is simply invaluable, while its ingenuity and neatness will make it an object of interest even to those of us whose good fortune it is to escape such investigations. For ourselves we confess that perpetuity, so far as this calendar is concerned, begins with the somewhat uncertain date of the new style—an uncertainty which our instructions do not dispel; and while referring to the instructions we cannot refrain from observing that Mr. Crisford's rule for finding the golden number does not always work, and might be improved by adding the unit to the remainder, instead of to the dividend as he directs.

Fairplay.—Parties in this case were placed at a disadvantage by want of candour in the patient or his friends. Dr. A., we think, should accept the explanation of Dr. C., who acted *bonâ fide*, in urgent circumstances.

Dr. Santini (Rome).—The copy has been received.

ERRATUM.—The second name in the first line of our annotation on the Diagnostic Value of Fluorescein Dye in Diseases of the Eye, p. 447 *ante*, should have been printed Groenouw, not "Grovenonn."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Skene Keith, London; Dr. Boobbyer, Nottingham; Mr. J. Furley; Mr. R. Leigh, Liverpool; Mr. H. C. Jones, London; Mr. C. K. Bond, Liverpool; Mr. E. G. Byrne, Colon; Mr. Harcourt, Essex; Mr. Spowart; Dr. McKenow, Workington; Dr. Digby, Stafford; Messrs. Shelley and Co., London; Dr. Alex. Wallace, Colchester; Messrs. Richardson Bros., Liverpool; Dr. T. Oliver, Newcastle-on-Tyne; Dr. E. Warren Bey, Paris; Dr. Holden, Birmingham; Mr. R. Potter; Sir Walter Foster, Edgbaston; Mr. B. S. Ringer, Amoy; Messrs. Burroughs and Wellcome, London; Mr. A. T. Hunter, Edinburgh; Mr. Cleary, New York; Dr. H. Snow, London; Mr. J. Tweedy, London; Mr. D'Arcy Power, London; Mr. J. R. Roberts, Gilgit; Messrs. Richardson and Co., Leicester; Mr. Sleman; Dr. Atkinson, Surbiton; Messrs. Bush and Co., London; Dr. Collins, London; Dr. Ridge, London; Dr. Hale White, London; Mr. C. Cotton, Ramsgate; Messrs. G. Street and Co., London; Mr. Cropley, Northampton; Messrs. Smith, Elder, and Co., London; Mr. Haviland, Douglas; Messrs. Rock, Hawkins, and Thorpe, Hastings; Mr. H. H. Taylor, London; Dr. Gaddes, Palmer Lake; Dr. Coldstream, Florence; Mr. Shaw, Worthing; Dr. Ogier Ward, Tottenham; Dr. Sellers, Radcliffe; Messrs. Mitchell and Co., London; Mr. W. R. H. Stewart, London; Messrs. Carnrick and Co., London; Mr. James, Highfield; Mr. V. Horsley; Messrs. Ash and Sons, Golden-square; Mr. Reck, Melbourne; Mr. Laban, West Bromwich; Mr. Drewett, Paris; Mr. Duke, Dublin; Messrs. Kilner Bros., London; Mr. Matthews, Birmingham; Messrs. Blondeau et Cie., London; Mr. Ackrill, Harrogate; Mr. A. Frost; Messrs. Cox and Co., Brighton; Mr. Marshall, Uttoxeter; Messrs. Heilgers and Co., London; Dr. Favrat, Madeira; Mr. Obert, London; Messrs. Watkins and Osmond, London; Mr. Horner, Scarborough; Mr. Visser, South Africa; Mr. Cranny, Dublin; Dr. Williams, London; Messrs. Keene and Ashwell, London; Mr. Lloyd, Ventnor, I.W.; Messrs. Palmer and Sons, London; Mr. Sharpe, Matlock; Messrs. Mackey, Mackey, and Co., London; Mr. Gurner, London; Mr. Webb, Bury; Messrs. Flatau and Mankiewicz, Berlin; Dr. Windle, Halifax; Messrs. Coupland and Co., Burnley; Mrs. Theobald, Leicester; Messrs. W. H. Smith and Son, London; Mr. Thomas, Liverpool; Messrs. Paternoster and Hales, Hitchin; Dr. Newman, Capri; Mr. Nance; Messrs. Pimms and Co.; M. Battistini, Bologna; Mr. Bullivant; Messrs. J. Wright and Co., Bristol; Mr. Fox, Manchester; Matron, Portsmouth; Pauper; M.R.C.S., L.S.A.; Espec; Medicus; R. R.; Royal Albert Edward Infirmary, Wigan; M.D., M.B., C.M.; B.; Secretary, Norfolk and Norwich Hospital; A. C. G., Southsea; Alpha, London; A Qualified Assistant; M.B., Forest Gate; M.D., Newcastle-on-Tyne; Malleus Injustitiæ; Inquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Ross, Belfast; Mr. Wheeler, Manchester; Mr. Tully, Hastings: Mr. Evans, Llanerchymedd; Dr. Peacock, Kingswinford; Messrs. Burgoyne and Co., London; Mr. Forgitt, Lincoln; Messrs. Swan Sonnenschein and Co.; Dr. Johnson, Swindon; Mr. Orchard, Dublin; Dr. Baker, Forest Hill; Mr. Feeny, Bilston; Mr. Shannan, co. Durham; Messrs. King and Co., Horsham; Mr. Lockwood, Huddersfield; Messrs. Margrave Bros., Llanelly; Mr. Brown, Westgate-on-Sea; Messrs. Murray and Co., Paris; Dr. Bower, Bedford; Mr. Cowan, Glasgow; Messrs. Iles and Stradling, Watford; Miss Cotton, Bridgwater; Mr. Lowe, Upper Norwood; Mr. Walsh, Ireland; Mr. Perkins, Newport; Messrs. Rocke and Co., Hastings; Mr. Ramage, Largo, N.B.; Mr. Aspinall, West Kirby; Dr. Rentoul, Liverpool; Mr. J. Keegan; Messrs. Walker and Weller, Malvern; Mr. Tyte, Minchinhampton; Messrs. Fannin and Co., Dublin; Mr. Huntingdon, St. Andrews, N.B.; Messrs. Smith and Son, Birmingham; M. di Giacomo, Naples; Mr. Collier, West Kirby; Mr. Vert, Edinburgh; Mr. Boyton, London; Messrs. Eason and Son, Dublin; Dr. Leckie, Glamorganshire; Dr. Galbraith, Great Barmouth; Mr. George, Preston; Mr. Burcombe; Messrs. Hooper and Co., Pall Mall; Mr. Cochrane, Wigtownshire; Dr. Gibbes, Ann Arbor, Michigan; Mr. Forjitt, Lincolnshire; Messrs. Mann and Son, London; Mr. O'Meara, Loughborough; Mr. Young, Birmingham; Mr. Birchall, Liverpool; Mr. Griffith, Carnforth; Dr. Mygenc, Denmark; Mr. Smith, Fleet-street; Mr. Dinck; Mr. Heywood, Manchester; Mr. Thin, Edinburgh; Mr. Hornibrook, London; S. Pomfret; Country, London; Gavel, London; Bristol Infirmary; Birmingham City Asylum; Nurses' Institute, Leicester; Secretary, James Murray Royal Asylum, Perth; Beta, London; Z., London; Secretary, Devon Hospital, Buxton; Cicero, London; Ulna, London; Secretary, North Riding Infirmary, Middlesbro'-on-Tees; Oxon, London; Corporation of Birkenhead; Secretary, General Apothecaries' Co., London; Gordon Hotel Co., London; Hon. Secretary, Teignmouth; Secretary, Sheffield Public Hospital; M.D., Leeds; Alpha, Surrey; Secretary, Royal Eye Hospital, Manchester; Vere, London; Iota, London; Sigma, South Wales; M. M. B., London; Cantab, London; Delta, London; County Asylum, Rainhill; Alpha, Manchester; A. V. M., London; Doncaster General Infirmary; Muspratt, Brighton; Festino, London; Helix, London; Secretary, Portland-place; Iota, Folkestone; Ferndale, Torquay; Medicus, Holborn; Omega, London; M.D., London; Spes, London; Medicus, London; F. S. D., Leeds; A. B., London; Smilax, London; B. A. O., London.

NEWSPAPERS.—*National Guardian, Newcastle Daily Leader, Sheffield Telegraph, Manchester Examiner, The News, Liverpool Daily Post, Yorkshire Post, Scottish Leader, Insurance Record, Mining Journal, Hertfordshire Mercury, Surrey Advertiser, Leeds Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Sunday Times, West Middlesex Standard, Bristol Mercury, Builder, Broad Arrow, Chemist and Druggist, Metropolitan, Pharmaceutical Journal, Guy's Hospital Gazette, Architect, Spectator, Law Journal, City Press, Local Government Chronicle, Dundee Advertiser, Saturday Review, West Middlesex Advertiser, Manchester Courier, Lancaster Observer, Western Times, Taunton Courier, Army and Navy Gazette, West Breton Advertiser, Bury Standard, Hull Times, Rutland Post, Teesdale Mercury, Rochdale Observer, Antigua Standard, Royal Cornwall Gazette, Wolverhampton Chronicle, Nuneaton Chronicle, Health Sanitary Record, Melbourne Argus, Belper Chronicle, Natal Mercury, Bedworth Guardian, Buckingham Express, Shields Daily Gazette, Waterford Mirror, Staffordshire Sentinel, &c.*, have been received.

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